The Political Economy of Heterogeneous Communities: Local Governance and Cooperation in the Congo and Sierra Leone

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ABSTRACT

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In much of the developing world, the community is the arena of social interaction. Heterogeneity at this local level, combined with a weak state and economic underdevelopment, has been found to make communities particularly receptive to conflict. We know little about cooperation between members of different groups in such communities, and we know even less about the influence of actors — such as the village chief and Non-Governmental Organizations (NGOs) — that substitute for the state at this level. What role do the village chief and NGOs play in governing communities characterized by the influx of migrants? Do NGOs strengthen cleavages in heterogeneous societies? What is the role of the village elite in managing cooperation within a village? And which tools should researchers use to understand behavior at this local level? To answer these questions, this dissertation collected original data in the Democratic Republic of Congo (DRC) and Sierra Leone. Specifically, this project builds on carefully designed lab-in-the-field and field experiments, as well as original survey and ethnographic data, to explore the political economy of heterogeneous communities. The first essay shows how local institutions in the DRC are resilient to outside intervention. Importantly, I find causal evidence that local institutions, not NGOs, are key in sustaining high levels of intra-village cooperation in the presence of migrants. The second essay shows that NGOs in the same context influence how individuals relate to their social categories. I find that NGO activity can strengthen social categories that relate to access to development resources at the cost of those that benefit local cohesion. The final essay explores discriminatory behavior based on social status in rural Sierra Leone. I find that classic experiments may be insufficient in understanding behavior at the local level. In summary, this dissertation emphasizes the importance of research tools designed to measure local behavior, and challenges the basis for current international interventions by showing the positive role of the village chief and by providing micro-level evidence for the possible harmful role that NGOs can play in heterogeneous communities.

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Dedicated to those that live in the developing world.

Chapter 1

Introduction

In what follows I introduce this project's motivation and objectives, and then discuss the study's research approach and outline the three papers that form the dissertation.

1.1 Motivation and Dissertation Objectives

The Second Congolese War has been the deadliest conflict worldwide since World War II. Between 1998 and 2003, it is estimated that 3.9 million people were killed, mostly indirectly from disease and starvation (Coghlan et al. (2006)). Despite the formal end to the war in July 2003, the east of the country continues to be an epicenter of conflict. Around that same time — between 1991 and 2002 — a civil war took place in Sierra Leone. That conflict, which is estimated to have killed 50,000 people directly, has plunged the country deep into poverty. Fundamental to both wars were dynamics at the local level, in *heterogeneous communities*.[1] A leading explanation for the war in Sierra Leone argues that it can be best understood as the result of the confrontation between socially excluded youths and governing elites, where the former responded to the elites' demands for labor in unpaid 'community work' and their control over the customary marriage system (e.g. Richards (1996)). Similarly, leading explanations of the war in Congo argue for the importance of agendas at the community level, in which ethnicity and local antagonisms over access to land and traditional power played a

[1] Throughout this document I will use the adjectives "community", "village", and "local" interchangeably.

key role (e.g. Autesserre (2006)).

Although both conflicts have officially concluded, communities in the Congo and Sierra Leone remain fragile. A combination of three key characteristics drive the current context. First, many individuals live at subsistance level and basic infrastructure — roads, schools, and health facilities —is absent. Second, in both countries the central authority is weak, and lacks the ability to implement and enforce rules at the local level.[2] Third, in both rural Congo and rural Sierra Leone the primary arena of social interaction is the community, in which villagers depend on *local cooperation* to mitigate negative income shocks and provide basic public goods. There are good reasons to belief these cooperative structures are under pressure. Chief among them is that many communities are characterized by heterogeneity, which has been found to decrease cooperation (e.g. Habyarimana et al. (2007)). In Sierra Leone, there is evidence that grievances based on social status have persisted in the post-war period (Mokuwa et al. (2011)), and there are reasons to belief that recent attempts at decentralization have the potential to increase tension between social classes (Fanthorpe (2005)). In Congo, over 2.6 million people are currently internally displaced. This migration takes place in an area with large numbers of different ethnic groups, and the influx of migrants into communities can increase pressures on scarce land — a factor that has played a dominant role in the Congolese conflict in the first place (Claessens et al. (2013)).

The first objective of this dissertation is to understand cooperative behaviors within heterogeneous communities. This dissertation focuses on interaction based on migration status in the Congo (essay one and two), and interaction based on social status in Sierra Leone (essay three). Despite their evident significance for the countries in question, both cleavages have received surprisingly little attention in academic literatures.

An absence of the state at the local level does not automatically translate into the absence of *local governance*. In fact, governance without a state appears to be an empirical reality in many parts of the world (e.g. Risse (2010)). This dissertation focuses on two actors

[2]To illustrate this, compared to the author's country, the Netherlands, the Congo is 67 times larger but its government budget is 64 times smaller. And while Sierra Leone is only 2 times larger than the Netherlands, its government's budget is 603 times smaller. Budget is not in purchasing power parity terms. Source: CIA World Fact Book.

that substitute for the state. The first are local institutions. In the absence of formal institutions, traditional authority is pivotal to village life in most of the developing world (e.g. Acemoglu et al. (2014)). In both the Congo and Sierra Leone, it is the village chief that occupies this central position. The second actor is internationally-funded Non-Governmental Organizations (NGOs). Largely in response to the limited capacity of the state, these actors contribute billions of dollars in development and emergency aid. A major pillar of post-conflict interventions are community-driven development (CDD) projects — see e.g. Casey et al. (2013) for Sierra Leone and Humphreys et al. (2015) for the Congo. Mansuri and Rao (2013) estimate that in the last decade the World Bank alone spent $85bn on this broad class of interventions. These programs reflect the conventional wisdom about the role of local institutions: they are unaccountable despots (Mamdani (1996)). As a result, NGOs often actively bypass the village chief or undertake actions to weaken their position.

Another goal of this dissertation is to gain an understanding of the role of community institutions for local social interaction. Specifically, the first essay focuses on the role of the village chief for native-migrant cooperation. The dissertation also aims to understand the direct impact of NGOs on native-migrant cooperation (essay one), and community members' affiliation with different social categories (essay two). Finally, this project seeks to explore the interaction between NGOs and local institutions. Are external interventions indeed able to affect the role of local institutions in heterogeneous communities?

Communities in rural Congo and rural Sierra Leone are small. The villages under study in Eastern Congo have an average of less than 300 inhabitants. In Sierra Leone, the sampled villages have only around 200 inhabitants, on average spread across less than 30 houses. As a result, individuals in these communities have a lot of information about each other: they know each other well, have had previous interaction, and can recognize each others position inside their relevant social networks. However, traditional behavioral approaches to measure social interaction — such as lab-in-the-field experiments — are characterized by limited information: participants in these games are strangers and only know about each other what the experimenter reveals to them, which is often little. Researchers do this to isolate

underlying individual preferences without contamination by social considerations. However, there are good reasons to believe that at the local level social considerations are an important driver for behavior and might even dominate individual preferences.

A final goal of this project is thus methodological. The dissertation (essay three) aims to understand in how far classic games can be applied across contexts, and proposes a novel lab-in-the-field experiment to measure behavior at the local level. In doing so, this project contributes to the understanding of the relative importance of basic individual preferences versus socially determined preferences as a driver for behavior across contexts.

1.2 Research Approach

A first feature of this dissertation is an emphasis on original data collection — in the Congo and Sierra Leone — using a variety of methodological tools.[3] The instruments used can be found in the appendix. Four data collection strategies stand out:

1. *Migration-specific survey* Between January and August 2012, I conducted an original survey in 24 randomly selected villages in Eastern Congo's Buhavu chiefdom. The survey was specifically designed to learn about local-level migration patterns, and collected complete migration histories for 8,199 adults.

2. *Migration-specific lab-in-the-field experiment* Reliably measuring social outcomes using surveys is often difficult. In the Congo, for example, in response to a question asking about their opinion about migrants, natives may prefer to respond not with the truth but with what is socially desirable. Consequently, to measure discrimination in cooperation based on migration status, I also conducted a set of lab-in-the-field experiments in the same 24 villages with a total of 416 subjects. Because of this project's interest in native-migrant relationships, the sample is stratified based on the individuals' migration status to obtain equal numbers of natives and migrants.

[3]The data from the Congo was collected under Columbia University's IRB protocols "Migration and Cooperation" (IRB-AAAI0272) and "Measuring Cooperation Networks" (IRB-AAAJ2401). The data from Sierra Leone data was collected under Chicago University's IRB protocol H10076 (PI is John List), with subsequent approval from Columbia University's IRB to use the data.

3. *Status-specific lab-in-the-field experiment* Similarly, in Sierra Leone we might expect low status individuals to be hesitant to state their opinions about village elites truthfully. As a result, during spring 2013, I conducted a set of lab-in-the-field experiment in 46 villages in rural Sierra Leone. The games were played with a total of 736 subjects, half of which were high status and the other half were low status.

4. *In-depth qualitative work* Finally, essential to this dissertation is the combination of the experimental and statistical data with a deep contextual understanding of the topics in question. In the case of the Congo, the project draws on almost two years of in-country experience that includes several months of ethnographic work that I conducted in the Buhavu chiefdom in 2012. During this period I interviewed dozens of natives, migrant families and village chiefs to learn more about migrant-native interactions.

Another feature of this dissertation is the aim to move beyond simple correlations, and to make claims about causal relationships. Randomization is therefore fundamental to this project. In addition to the random selection of villages and individuals in the Congo and Sierra Leone, the dissertation builds on four other types of randomization:

1. *NGO variation* A study measuring the impact of NGOs faces the problem that such organizations might choose to work in certain villages and not others. For example, an NGO might choose exactly those villages where migrants face problems to integration, or where the chief is particularly despotic. To overcome this problem, the dissertation (essay one and two) makes use of the exogenous presence of a Community-Driven Development (CDD) program. The latter — implemented by the IRC and CARE International — operated between 2007 and 2011 in 1,250 villages in Eastern Congo. Important to this dissertation is that a public lottery was used to select villages into this program. To leverage the exogeneity in the presence of NGO activity, the 24 research villages in the Congo were randomly selected, taking into account the villages' treatment status to obtain balance between NGO and control communities.

2. *Experimental variation in the Congo* To assess the role of the village chief for native-

migrant sharing, I implemented the lab-in-the-field experiment in Eastern Congo with a variation. Each of the 416 participants played two versions of the experimental game: one where the dictator made allocations in private, and one where the dictator made allocations in the presence of the chief and a set of village notables. The order in which each version was played was randomized. Because the game makes use of a round-robin design, in which each player plays once with all other $n-1$ players, both the order of the dictators and the order of the receivers for each dictator was also randomly assigned.

3. *Experimental variation in Sierra Leone* Similar to the experimental variation in the Congo, in Sierra Leone each subject played four different types of lab-in-the-field experiments. The order in which these were played was assigned randomly. The order of the dictators and the order of the receivers for each dictator were also assigned randomly.

4. *Survey experiment* To understand individual strategic behavior in response to NGO activity, this dissertation (essay two) exploits a survey experiment. Before respondents decide how to rank their affiliation with five social categories, they received a prime about the identity of the enumerator — the enumerator is from a 'University' or from a 'NGO'. Each respondent was randomly allocated to one of the two primes.

A final characteristic of this dissertation is the aim for transparency. It is now a well-known fact that researchers have a lot of discretion to select positive findings, whether intentionally or not. For example, researchers can select certain dependent variables over others, select the sample size as a function of results to date, add additional covariates and/or interactions, and report only subsets of experimental conditions (e.g. Simmons et al. (2011)). One important reason to do so intentionally is that editors and reviewers may prefer significant results and reject methodologically sound articles that do not achieve certain statistical significance thresholds, such as the infamous $p < 0.05$ (Gerber and Malhotra (2008)). The result of such practices is an unreliable body of published research. This dissertation responds in two ways.

First, the data collection projects in the Congo and Sierra Leone have been pre-registered online: `www.egap.org/`. That is, the complete research designs were posted publicly before any analysis with collected data took place. There are several benefits of registration, including a reduced scope for "fishing", an opportunity to build a databank of studies and research designs, the ability to encourage study replication, and a new tool for communication. Regarding the latter, in a paper co-written with Macartan Humphreys (Columbia) and Raul Sanchez de la Sierra (Columbia), I argue how detailed preregistered designs can provide a mechanism for researchers and readers to distinguish between three different sorts of results: those that were executed according to predetermined specifications, those registered and that deviated on grounds that may be defended by researchers, and those that were not preregistered at all and for that reason should be interpreted as speculative (Humphreys et al. (2013)). As the study notes "The middle category constitutes something of a gray zone in which analysis may stay true to the intent of the registered design but the defense of the details of implementation must be provided ex post rather than ex ante (p.18)." On reflection, this dissertation is located in the dark gray zone for two major reasons. First, both registered designs featured in this dissertation moved away from hypothesis testing: the design did not state "X leads to an increase in Y", but stated "If X leads to an increase in Y, then we are in world A; and if X leads to a decrease in Y, then we are in world B".[4] Second, significant changes were made after registration. For example, while a key component of the dissertation (essay one and two) is the exogenous variation in NGO activity that comes from the CDD program, it was not pre-registered.

Second, the data and code for this dissertation (essay one and two) are available online: `www.petervanderwindt.com`.[5] In fact, all data necessary to write essay two were publicly available months before the paper was written. A major benefit of doing so is that readers can best assess the quality of research when they can analyze the data themselves. It allows the readers to probe arguments, and makes the dissertation's findings challengeable (Green et al. (2013)). As a result, I made all the data collected — not just the data necessary for

[4] I will return to this in Chapter 4.

[5] Note that the data and code for essay three is not yet online.

replication — publicly available.

1.3 Dissertation Outline

The next three chapters consist each of a separate essay. The first investigates the impact of local governance structures on native-migrant sharing in Eastern Congo. Classic literatures suggest that the influx of migrants endangers such cooperation. Conscious of the risks posed by such heterogeneity, international actors implement interventions to ease the integration of new migrants and to prevent their exploitation by local despots. This essay uses an original survey among 8,199 Congolese villagers and a set of innovative experiments (with 416 participants: half native, half migrant), to reassess the relationship between migration and cooperation. Using an experimental variation I find that the village chief plays a key role in sustaining high levels of cooperation between migrants and natives. In contrast, evidence from a downstream experiment and in-depth qualitative work demonstrates that NGO activity might have a harmful impact on relations by natives and migrants by engendering resentment from the first to the latter. Finally, I find no empirical evidence that NGOs are successful in changing the role of the village chief within heterogeneous communities.

The second essay focuses on the role NGOs play in shaping how villagers in Eastern Congo identify themselves. It posits that Congolese strategically choose to associate with certain social categories over others in order to maximize the probability of obtaining access to NGO resources. This statement is supported by empirical evidence from a survey experiment I conducted among 1,929 Congolese villagers. Furthermore, by exploiting exogenous variation in the presence of NGO activity across Congolese villages, I find evidence that those social categories initially chosen for strategic reasons can persist over time. This essay highlights that NGO activity can be harmful in heterogeneous communities: I find that the presence of external resources solidifies self-categorization among migrants that benefit access to resources ("I am poor" and "I am a migrant") at the cost of those that benefit cohesion within the community ("I am Congolese" and "I am a member of the village").

The final essay, written in collaboration with Neelanjan Sircar (Columbia), Maarten Voors

(Wageningen) and Ty Turley (Brigham Young), has two objectives. First, the essay explores sharing behaviors based on social status in Sierra Leone. To do so we conducted a lab-in-the-field experiment with 736 participants (half are members of the village elite, half are not) in 46 rural villages. We find empirical evidence that individuals discriminate based on social status. Second, the essay investigates how well popular lab-in-the-field experiments travel across contexts. We directly compare a classic attribute-based dictator game, which is characterized by limited information, to a set of attribute-based dictator games specifically tailored to the local level where individuals know a lot about each other. We find that classic experimental games do not directly translate to the community level in which basic individual preferences are likely to be swamped by local, social considerations.

Finally, Chapter 5 summarizes the study's main findings, relates these findings to the wider academic literature, and suggests future avenues for research.

Chapter 2

Local Institutions Sustain Native-Migrant Sharing

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[1]Email: pv2160@columbia.edu. I thank Alexandra Cirone, Macartan Humphreys and Neelanjan Sircar. I also thank Eustache Lulego Kuliumbwa, Desire Cizungu Bazibuhe, Freddy Koleramungu Zabandora and Jean Paul Zibika for excellent in-country work. Thanks also to Mieke van der Windt for research assistance. I am grateful to the Earth Institute, the Center for the Study of Development Strategies, the Applied Statistics Center and Massimo Morelli for funding this study. Thanks also to Wageningen University where part of this paper was written. Replication data, code and survey instruments can be found at www.petervanderwindt.com.

Abstract

In much of the developing world, households depend on sharing arrangements within the village to mitigate risks. These areas are also characterized by the influx of new migrants into the village, which might undermine village sharing. Local institutions (e.g. the village chief) and NGOs play an important role in shaping relations between natives and migrants. By making use of a set of novel experiments in the Democratic Republic of Congo, this paper explores sharing behaviors between natives and migrants at the village level. Furthermore, I exploit an experimental variation and find that local institutions play a key role in sustaining high levels of native-migrant sharing. Next, by leveraging the random assignment of an international NGO program across my research villages, I find causal evidence that NGOs decrease native-migrant sharing when decisions are taken in private. However, this effect disappears when decisions are monitored by the village chief suggesting that local institutions are resilient to outside intervention, and that it are local institutions, not NGOs, that uphold within village sharing. This study challenges the basis for current international interventions, and provides micro-level evidence for the important role local institutions play in divided societies in areas where the state is weak.

2.1 Introduction

Because the reach of the state is limited and formal insurance markets are absent, many individuals in the developing world depend on informal, within-village sharing—often in the form of gift giving, shared meals, no interest loans, and access to land—to mitigate negative income shocks. A large literature argues that such arrangements are uphold because of the presence of directed altruism (individuals share because they are similar), and due to repeated interactions (people share because they care enough about the future and interactions are repeated over time).[2] Another key characteristic of the developing world is high rates of internal migration (UNDP (2009)). Little, however, is known about the relationship between migration and sharing despite the fact that there are good reasons to believe that migrants endanger within village sharing. First, migrants often have different attributes than the native population and thus weakens motivations for directed altruism. Second, migrants are less integrated and more likely to leave the village and thereby weakening motivations for reciprocity. Indeed, the few studies that refer to both topics suggest that migration puts sharing at risk. Bowles and Gintis (1998), for example, show the need for restricted mobility for village sharing to persist, and Greif (2006) discusses how sharing among traders in medieval Europe broke down due to increased levels of migration. It is necessary that we obtain a better understanding of migration and sharing. For example, poverty is a well-known determinant for participation in conflicts (e.g. Humphreys and Weinstein (2008)). If migration indeed undermines within-village sharing, and thus a community's ability to mitigate risks, migration might function as a vehicle for conflict to spillover from one village to the next.[3] This paper takes a first step to understand sharing among migrants and natives.

While the political economy literature on migration has largely focused on rural-urban

[2]The existence, efficiency and motivations for informal sharing have been well-documented: Coate and Ravallion (1993), Ravallion and Chaudhuri (1997), Udry (1994), Platteau (1997), Fafchamps (1992), Ligon et al. (2002), Ligon and Schechter (2012), Das Gupta (1987), Rosenzweig (1988), Townsend (1994), Besley (1995), Chapter 8 in Bardhan and Udry (1999), and Chapter 15 in Ray (1998) A third reason for sharing is more closely related "moral economists" such as Scott (1977) and Thomson (1971). Bowles and Gintis (2011) argue that cooperation exists because of the evolution of social emotions such as shame and guilt, and the capacity to internalize social norms.

[3]See e.g. (Buhaug, 2008; Salehyan and Gleditsch, 2006; Van der Windt and Humphreys, 2015) for evidence on conflict spillovers.

migration,[4] the vast majority of migration in the developing world can be classified as local, rural to rural migration.[5] As a result, this study focuses exclusively on native-migrant sharing *at the village-level*. In the absence of the state, two actors have to be introduced without which an understanding of cooperative behaviors between natives and migrants at the village level would be incomplete: local institutions and international actors.

The lowest layer of hierarchy in most developing countries is often occupied by the village chief. Village chiefs manage local conflict, raise taxes, control the judicial system, and allocate land—the most important resource in rural areas. Despite their central role, relatively little is known about the workings and impact of this local institution. This study argues that chiefs play a key role for within-village sharing by allowing access to only those migrants that increase average levels of donations. Moreover, villages in the developing world are characterized by high level of public *scrutiny*. The village chief is able to leverage this scrutiny to allocate resources to those individuals that behave well, and punish those that do not. In response, migrants undertake cooperative behaviors to integrate into the village. Cognizant of these factors, only certain individuals *sort* into the village in the first place. The second key actor that has a large impact on native-migrant interactions are internationally funded Non-Governmental Organizations (NGOs). NGOs are especially active in areas with high levels of population movements, in part to assist new migrants. Resources introduced by NGOs—such as food items, jerry cans, agricultural inputs, etc.—are substantial compared to the resources the village can raise internally. These outside resources have the potential to provide the village with the means to absorb incoming migrants and alleviate pressures on

[4]This literature has focused primarily upon the decision to migrate and the selection of destination (Borjas (1994), Ruiz and Vargas-Silva (2013)). For example, people may migrate voluntarily to earn higher wages Sjaastad (1962) or higher expected wages Todaro (1969), to diversity income risk Rosenzweig and Stark (1989), in response to an NGO project or price change (Rosenzweig and Wolpin, 1988), or may be forced to do so because of violence: Schultz (1971), Davenport et al. (2003), Melander and Öberg (2007), Moore and Shellman (2004), Bohra-Mishra and Massey (2011), Engel and María (2007), Ibáñez and Vélez (2008), and Adhikari (2013). Throughout this paper I use the term 'migration' also for 'displacement', or conflict-induced migration.

[5]Lucas (1997) writes "The extent of rural-rural migration is not well documented, particularly when this involves intra-regional movements. Where analysis proves possible, the rate of rural-rural migration typically proves far higher than of rural-urban migration (p. 728)." One reason for this neglect in the literature, Lucas (1997) continues, is, in addition to increased data collection difficulties, that the early dualistic development models envisioned a rather homogeneous rural sector, within which migration was seen to confer no real benefit.

within village sharing. On the other hand, by specifically targeting resources to migrants only NGOs can harden cleavages between natives and migrants and hamper migrant integration. Furthermore, conventional wisdom about the role of local institutions holds that they are unaccountable to local populations, and that chiefs act as unaccountable despots (Mamdani (1996)). As a result, to prevent the exploitation of migrants by local despots, NGOs often actively bypass the village chief or undertake actions to weaken their position. In so far as chiefs play a positive role for native-migrant sharing, international interventions in local social processes might thus actually undermine sharing.

To sum up, this study makes an important contribution to the literature on institutions by providing micro-level evidence of the role of local institutions in the absence of the state. In doing so the paper adds to a very nascent literature that analyzes the impact of *local* institutions on development outcomes (e.g. Logan (2013), Acemoglu et al. (2014), Turley et al. (2014)). Furthermore, this paper joins a small number of studies that investigate the developmental impact of NGOs (Fearon et al., 2009; Casey et al., 2013; Humphreys et al., 2015) and resource windfalls (e.g. Paler (2013)) at the micro level.

To explore native-migrant sharing, and the role of the village chief and international intervention, I employ original data collected in the Democratic Republic of Congo (DRC). Four characteristics of this study's empirical strategy are particularly noteworthy. First, to learn about migration patterns I conducted a detailed survey specifically designed to learn about migration. That is, in 24 randomly selected villages of Eastern Congo's Buhavu chiefdom, complete migration histories were collected for about 8,199 adults. I find that: 1) migration rates are high, with more than two-third of all individuals currently living outside their village of birth, 2) migration is characterized by local, rural to rural migration, 3) migrants are very different from natives on a number of key individual and household level characteristics, 4) the chief plays an important role in village life for both natives and migrants, and 5) NGOs are an important actor in the region. Second, I overcome selection effects present in survey data and move beyond self-reported information, and measure discrimination in sharing by employing experimental games. In the 24 villages a total of 416 subjects (half migrants, half

natives) were selected to play attribute-based dictator games (ADG). Importantly, I extend this classic game to a *local* ADG, where participants know each other (they are members of the same village) and the identity of the receiver is revealed to the dictator. this study will argue that results from such a game provide better estimates of sharing at the local level. Third, I implement the experiment with a key variation, in that all participants play the dictator game twice: once in private, and once in the presence of the chief and several village notables. This makes it possible to isolate the pivotal role of chief scrutiny for sharing within the village. Finally, to learn about the *causal impact* of international intervention on native-migrant sharing directly, and indirectly via their impact on the village chief, I exploit a downstream experiment in which NGO resources are randomly allocated to villages.

This study has four major results. First, in private, migration is negatively associated with village contributions to sharing: 1) migrants contribute less to natives than natives do, and 2) both migrants and (especially) natives exhibit ingroup bias: both discriminate in favor of those with the same migration status. This suggests that natives are not successful in allowing access to only those migrants that would increase average levels of donations. Second, local institutions are key in sustaining high levels of contributions between natives and migrants. Specifically, when the chief is observing game decisions, a setting that better reflects the realities of social interaction at the village level, contributions to sharing increases. Especially contributions by migrants to natives increases in the presence of the chief. Third, by making use of a downstream experiment, I find that, in private, NGOs have a negative impact on individual contributions. Especially contributions by natives to migrants go down. Extensive qualitative evidence suggest that this can best be explained by resentment of natives that do not benefit from the distribution of aid resources by NGOs. Finally, by combining the the experimental variation in NGO activity and the chief observing game play, I find that NGOs do not undermine local institutions. In fact, by comparing the NGO impact in the private and the public game, I find that the village chief is able offset the decrease in contributions resulting from NGO activity.

The results in this study therefore suggest that not only are local institutions resilient to

outside intervention, it are these local institutions, and not NGOs, that uphold within village sharing.

The paper is organized as follows. The next section anchors this study in the Congolese context, and introduces the relationship between local institutions, international intervention and native-migrant sharing. Section 2.3 and 2.4 present the positive and negative role of local institutions and international intervention, respectively. I conclude in Section 2.5.

2.2 Context: Migration in the Congo

This study focuses on Eastern Congo, an area where migration is prevalent. A survey conducted in 2007 throughout Eastern Congo (indicated by the larger black square in the left panel of Figure 2.1) finds that 42% of the respondents lived in a different village in 1996.[6] To investigate population movements in more detail, this study zooms in on a smaller part of Congo. conducted a census between January and August 2012 in 24 randomly selected villages of South Kivu's Buhavu chiefdom (indicated by the smaller red square in the left panel and the squares in the center and right panel of Figure 2.1).[7] For a total of 4,015 household heads and their spouse(s) the survey collected information about all locations of residence, the year of each migration, and the reason for these movements, creating a dataset on 8,199 adults and 18,282 movements.

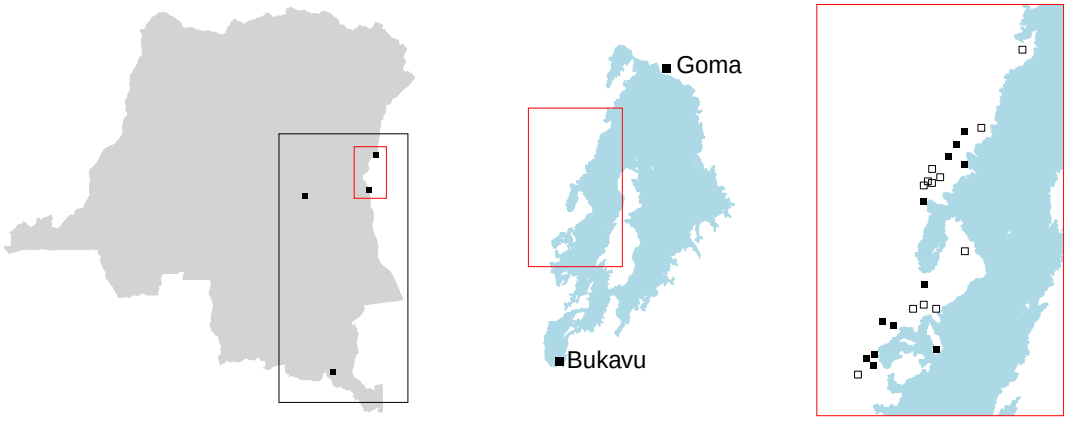
In addition to the prevalence of migration is prevalent, two additional points stand out.[8]

[6]The survey contains information about 2,906 households drawn randomly from 588 villages selected randomly from Congo's Haut Katanga, Maniema, South Kivu and Tanganyika provinces (Humphreys (2008)). Not surprisingly, an important driver of this migration is conflict. A full 71% of household members have fled at least once between 1996 to 2007 due to armed conflict. Conflict has engulfed Congo for over two decades, most prominently during the First and Second Congolese Wars (1996-1997 and 1998-2003). The latter, with the direct involvement of eight African nations and 25 armed groups, has been the deadliest war in modern African history It is estimated that between 1998 and 2007 the war and its aftermath had killed 5.4 million people, mostly from indirect causes such as disease and starvation (IRC, 2007). Despite the formal end to the war in July 2003, the country, and in particular the South Kivu province where this study's data has been collected, continues to be an epicenter of conflict. The roots and the dynamics of the Congolese conflict are too complex to be discussed in detail here. For a good discussion see: Autesserre (2010) and Prunier (2009).

[7]The sampling frame was created together with the International Rescue Committee and CARE International in 2010 and includes all villages in the Buhavu chiefdom. Village selection was conditioned on migrant presence (more than 25 migrant households), basic safety conditions for the surveyors and the condition that half of the villages were part of the Tuungane development program (see Section 2.4). The sampling frame and code is available upon request.

[8]85% of individuals moved at least once in their life, and more than two-thirds currently live outside their

Table 2.1: Map Research Area



Notes: Left panel: The Democratic Republic of Congo with the cities (from left to right): Maniema, Lubumbashi, Bukavu and Goma. Center panel: Lake Kivu. Right panel: The research villages where solid (hollow) squares denote participation (no participation) in the Tuungane program (Section 2.4). For identification reasons village names are omitted.

First, the vast majority of movements in Eastern Congo can be characterized as local, rural to rural migration with individuals not moving to larger cities but to other rural villages.[9] This observation is in line with recent evidence that in Eastern Congo conflict spillovers (possibly driven by population movement) operate at the very local level geographically (Van der Windt and Humphreys (2015)).

Second, there are good reasons to believe that migrants endanger within village sharing in Congo. As discussed above, migrants may not mirror the attributes of the native population and thus weaken motivations for directed altruism, and they may weaken motivations for reciprocity as they are more likely to leave the village again. Information from the survey

village of birth. While this result is in part due to the criteria for village selection. Individuals move for a large number of reasons. Not surprisingly, conflict has been the major driver for migration in Congo. While it is not in the scope of the paper to look at subgroups, this is interesting future work.

[9]There are two major urban centers in this region: Bukavu and Goma, respectively the capitals of the South Kivu and North Kivu provinces. Of the 18,282 movement destinations mentioned, Bukavu and Goma were mentioned only 3% (511) and 4% (775) of the time. The main reason to visit these cities was for work or family, and these visits were often only brief — the majority moved back to the rural area that same year and almost 90% moved back within two years. To be confident that this result is not driven by no-return individuals I compared per village the household list created from the census in 2012, with household lists created in 2010 for another project. The presence of a household on the latter but not on the first is evidence for death or outmigration. For those households that migrated out of the village I obtained their ethnic membership, the reason for outmigration and destination. Less than two percent moved to Bukavu or Goma.

corroborates these worries. Table 2.2 compares natives and migrants for a set of individual and household-level characteristics.[10] Migrants in the Buhavu chiefdom are very different than natives. Migrants are more likely to be female, young, less educated, and less likely to be member of the Havu tribe (the chiefdom's majority ethnic group). Migrant households are also poorer, have fewer agricultural plots and poultry. Importantly, migrants are also less integrated: they are more likely to expect and want to live in another village in five years; are less biologically related to the village chief; meet the chief less often than natives; are less likely to be part of a village association or committee; and are less likely to feel member of the village.[11] In a setting where migration is prevalent, and where they are very different, a better understand of the interaction between natives and migrants, and the role of local institutions and external interventions, is important. I turn to this now.

2.3 Native-Migrant Cooperation and Local Institutions

In this section I propose two mechanisms how local institutions maintain cooperation between natives and migrants: selection-at-the-gate and ingratiation period. In both mechanism the village chief plays a key role. In the absence of formal institutions, traditional authority is pivotal to village life in most of the developing world (e.g. Acemoglu et al. (2014)). In the DRC, it is the village chief that occupies this central position.[12] Among villagers in Eastern Congo, 66% indicate that the village chief is the most influential person to resolve conflict

[10]Throughout this study I define a *migrant* as anyone who satisfies the following two criteria: 1) the individual is not born in the village; and 2) the individual took up residence in the village within the last 5 years. The complement is the *native* population. This definition was decided upon after months of fieldwork that included interviews with dozens of migrants, natives and villages chiefs. Table 2.2 shows how natives and migrants do not differ significantly in the number of times moved. Sensitivity of the results to the migrant definition might thus be a worry. Defining migrants as those individuals that took up residence in the village within the last two years, and natives as those that have lived in the village for more than two years, gives very similar result to those reported in the paper.

[11]Biological relatedness is measured by the Hamilton index, which indicates the biologic relatedness — based on genes — between two individuals: for a parent-offspring or full sibling relationship this index is 0.5, for an aunt/uncle or nephew/niece relationship this is 0.25, etc. Feelings towards village membership are measured by individuals' responses to a survey assignment in which I ask them to rank from important (1) to least important (5) the following five identities: "I am a migrant", "I am Congolese", "I am a member of the village", "I am a member of ethnic group [ethnic group of the respondent]" and "I am poor".

[12]The 2007 survey finds that 44% of all chiefs inherited their position. Others are chosen by the king (12%), village elders (15%), or via a village election (25%).

Table 2.2: Comparison Migrants and Native

	Natives			**Migrants**			
	Mean	SD	N	Mean	SD	N	Diff.
Individual Characteristics							
Male	0.84	0.37	2344	0.80	0.40	1230	-0.04***
Age	42.06	15.74	2277	36.94	13.52	1179	-5.13***
Member of Buhavu tribe	0.86	0.35	2350	0.51	0.50	1228	-0.35***
Ownership							
Total number of fields	1.59	1.32	2361	0.85	1.18	1244	-0.75***
Owns a field inside the village	0.75	0.44	2361	0.23	0.42	1244	-0.51***
Wives	1.10	0.52	2361	0.92	0.52	1244	-0.18***
Has a wife inside village	0.87	0.34	2361	0.73	0.44	1244	-0.13***
Poultry (chicken, turkey, ducks)	1.07	2.38	1421	0.62	1.59	728	-0.46***
People in household	7.29	4.05	2306	6.99	4.00	967	-0.29*
Migration History							
Times moved	2.51	2.14	2361	2.68	1.99	1244	0.17**
Times moved due to conflict	0.77	0.88	1914	0.95	0.98	1244	0.18***
Number of different villages lived in	2.43	1.20	2361	3.08	1.23	1244	0.65***
Integration							
Hamilton index to village chief	0.04	0.14	1647	0.01	0.06	835	-0.03***
Expects to live here in five years	0.98	0.15	1597	0.91	0.28	828	-0.06***
Feels member of the village (1-5)	2.71	1.05	1467	2.11	1.10	876	-0.60***

Notes: Top panel based on 1,243 migrants and 2,362 natives. One, two or three asterisks indicate, respectively, significance levels at the 10%, 5% and 1%. Variables Hamilton (Expects) [feels member of village] {Poultry} only from and including village 3 (4) [5] {6} onwards, which explains the lower number of observations.

among villagers. This number increases to 80% if also village elders and religious leaders — often the chiefs' right hand when it comes to managing village affairs — are included. There are three main reasons why chiefs play such an important role in village life. First, chiefs enjoy popular legitimacy, giving the chief a moral claim to undertake such activities. Indeed, of the same villagers, 63% indicate that the chief should be the most influential person to resolve conflict among villagers (78% if elders and religious leaders are included). A second reason is the chief's control over within village resources such as land, which in rural Congo is the most important resource for survival (e.g. Van Acker (2005), Vlassenroot and Huggins (2005), and Claessens et al. (2013)). Finally, Congolese villages are small and the spheres of

private and public life are not neatly separated. Chiefs use the high levels of public scrutiny to monitor behavior by fellow villagers. This study explores two mechanisms to understand the role of local institutions for native-migrant cooperation: selection at the gate and ingratiation period.

First, to safeguard existing sharing arrangements within the village, natives undertake what I will call *selection-at-the-gate*, where some migrants upon arrival are allowed entry into the village whereas others are not. Natives may use diffuse social networks such as common friends and acquaintances to decrease the level of uncertainty about the type of migrant. In practice, selection-at-the-gate is often more subtle than outright rejection by the village chief. Upon entry into the village the migrant will be dependent on the native villagers for an extended period of time for things like accommodation and food. In the Congo, as in most of the developing world, a village's absorption capacity is limited and often only a subset of potential immigrants can be accommodated. Those migrants that have family ties in the village are often better informed and more able to obtain the available accommodation than those without ties to the village. In Congo, as a rule, upon arrival in the village migrants first visit the village chief. In turn, (potential) migrants take this mechanism into account when making the decision whether and where to migrate. Migrants thus do not settle randomly across the landscape. Migrants enter certain villages, and not others. This mechanism consist of two parts: the extent to which natives are successful in only allowing good migrants into the village, and the extent to which this is taken into account by (potential) migrant populations in their destination choice, and in their decision whether to migrate in the first place.[13]

Second, scrutiny refers to the extent individuals leverage the village's high levels of information and social interaction. After receiving access to the village, natives submit migrants to an *ingratiation period* to separate 'good' migrants from those that are not. That is, na-

[13]Tiebout (1956) described "sorting equilibria where populations sort into optimum communities based on the offering of varying baskets of goods (government services) at a variety of prices (tax rates). This logic has been extended to understand to strategic extension/dissolution of welfare benefits by governments in order to manipulate migration into the territory (Peterson and Rom (1989), Voldon (2002)). In this literature, however, benefits are provided by the government. In the scenario under study in this paper, benefits are tied to interpersonal relations in the village, and, thus, the level of benefits are endogenous in a very different way and relate to who migrates into the village.

tives may grant migrants entry to the village but wait before reciprocating contributions by migrants. During this period, natives (and in particular the village chief) restrict access to the tools necessary for integration, such as access to land and marriage, until the migrant has shown to be a sufficiently good citizen of the village.[14] On their side, migrants can utilize this initial period to create a favorable standing in the village. A favorable standing in the village has direct strategic benefits such as access to land and marriage. Moreover, a lack of cooperative behavior may be cause for isolation, or even expulsion from the village. In Congo, then over time the chief allocates plots of land to often only a subset of the hosted migrants. Two types of data provide evidence in support that migrants are absorbed into the village's public scrutiny network.[15] First, the census was specifically designed to learn about host relationships.[16] I find that of the 4,015 households in the sample almost 10% (387 households) are hosted. Second, I collected GPS locations for all these households, and find that migrants do not cluster but are spread throughout the community. Migrants and natives are thus equally captured by the scrutiny mechanism. However, while both natives and migrants are influenced by this mechanism, migrant behavior, given migrants' weaker position in the village, is expected to be particularly sensitive to scrutiny. This latter mechanism we will test directly now.

2.3.1 Experimental Design

The census (Section 2.2) was implemented in concert with a set of experimental games to obtain a better understanding of migration patterns and native-migrant interactions. There

[14] In Western countries, immigrants are typically expected to go through a naturalization process. The ingratiation period discussed here can be seen as a village-level equivalent to this process.

[15] I also test directly whether migrants are known in the village. To do so each game participant is asked about each other player whether she knows the other. Almost all players know each other, and migrants are equally known in the village as natives.

[16] A common definition for a household is "Those that share the same cooking pot in the last month". This is not a suitable definition for this context for two reasons. First, Congo is a polygamous society where the head of the household often eats with one wife for an extended period of time. Second, while hosted families live on the same premise, they often do not share their cooking pot with the hosting household. The definition used for this study is "Those that share the same cooking pot with the head of the household in the last month". The enumerator then records whether and if so which other household it is hosting or is hosted by. This results in a database with hosted households nested into other hosting households. Beaman and Dillon (2012) discuss the importance of the household definition in more detail.

are two key benefits of adding an experimental component. First, it can often be difficult to determine behavior from survey responses alone. For example, in response to a question asking about their opinion about migrants, natives may prefer to respond not with the truth but with what is socially desirably. A second reason is that measuring cooperative behavior as recorded contributions in a survey faces the problem that this captures not just other regarding preferences but also the need for such sharing. The introduction of a new sharing problems — for example, in the form of an experimental game — overcomes such selection effects. Specifically, to measure native-migrant sharing I extend the attribute-based dictator game, the workhorse game to measure discrimination in the willingness to take action in the interest of others at personal material cost. In brief, the attribute-based dictator game takes a single player, the sender, and asks her to split a fixed sum of money, the endowment, between herself and another person, the receiver. The sender is under no obligation to donate any money to the receiver.[17] Before the allocation decision the dictator receives an experimentally-controlled "cue" regarding the receiver and no other information, and then plays the game at least twice — each time with a different 'type' of receiver. For example, a researcher interested in discrimination based on migration status designs an experiment in which the dictator splits a fixed sum of money once between herself and a "migrant", and a second time between herself and a "native". The difference in contribution is then a measure of migration-based discrimination.[18] The sample was chosen in such a way to ensure an equal number of native and migrant players. Specifically, the heads of household resulting from the census, in conjunction with their native/migrant status, were used as sampling frame to select nine native and nine migrant individuals per village. In total I obtain game-behavior for a total of 416 participants from 24 villages.[19]

[17]Predictions based on standard Nash equilibria are that the dictator will keep all of the money for herself. Empirically, however, one finds that 60% of dictators donate a positive amount of money towards the receiver, with a mean transfer of around 20% of the endowment (Camerer (2003)). This suggests that people have more complex preferences beyond personal gain, which is typically referred to as "other-regarding preferences" (Fehr and Schmidt (1999) and Bolton and Ockenfels (2000)). For a critique of this interpretation see List (2007).

[18]A recent literature in political science and economics has used this technique to show discrimination in pro-social behavior by gender Holm (2000), ethnicity (Whitt and Wilson (2007), Habyarimana et al. (2007)), and partisanship (Fowler and Kam (2007)).

[19]In the first village, the pilot village, 10 individuals (5 natives and 5 migrants) participated. In the subsequent three villages 16 individuals (8 natives and 8 migrants) were selected. It was only after these four

The experimental games conducted for this study, however, extended the classic dictator game in two important respects. First, villagers in Congo know each other well and have regular interaction. I introduce a new version of the dictator game that actively takes the local context into account. How do such games relate to real-life behavior in a Congolese village? The classic game is played anonymously — the dictator does not know anything about the receiver beyond the cue under study. As a result, the intuitive empirical interpretation of such games is that it measures the extent of discrimination between random strangers who can only discern the attribute under question. An important feature of interaction among villagers in Congo, however, is that they make more informed decisions. First, these rural villagers know more about each other than only the cue under study. Second, behavior between them is also guided by previous experiences. Finally, their interaction also depends on their relationship with other, third actors. These three factors are important for sharing at the local level, and Levitt and List (2007), for example, argue that by not taking into account such factors classic lab games could incorrectly estimate levels of discrimination. I extended the classic games to what I call a local attribute-based dictator game, where the dictator plays with individuals who are from the same village, and the identity of the receiver is revealed to the dictator (in this study by means of an instant picture). Because dictators now make informed allocation decisions, I obtain more realistic estimates of sharing at the village level.[20]

To test the importance of scrutiny for native-migrant sharing I implemented the experiment with a variation. Each of the 18 participants played two versions of the experimental game: one where the dictator made allocations in private (the "private" version), and one where the dictator made allocations in the presence of the chief and a set of village notables (the "public" version). In the latter, the participant introduced herself to the village chief and notables present. Moreover, in each round the enumerator showed the picture of the receiver and read out the receiver's name to those present—so that the identity of the receiver is

villages, when the research team was more experienced, that the number of participants per village could be increased to 18.

[20]This is part of a larger agenda to incorporate context into experimental games. See Sircar and Van der Windt (2015), and Sircar et al. (2014b) for a more formal discussion and a direct test.

known to both the dictator and the chief and notables. Finally, after each of the 17 rounds, the enumerator told out loud the dictator's allocation decision to the chief and notables. The order in which each version was played was randomized to prevent contamination of the results by learning effects.[21]

2.3.2 Results

The left panel of Figure 2.1 shows the average donation by dyad type and game variation, where hollow (solid) circles indicate the private (public) variation.[23] N→M, for example, indicates the contribution by a native dictator to a migrant receiver. The 95% confidence intervals are constructed from the test whether the average contribution are bounded away from zero.[24]

The hollow dots in the left panel in Figure 2.1 illustrate average contributions in private. Contributions in all four dyads are significantly bounded away from zero with average contributions at 20.3%, 17.0%, 16.5% and 17.3% in the N→N, N→M, M→N and M→M dyad, respectively.[25] A first result is that native dictators donate on average 23% more to native

[21]Note that by comparing anonymous play to play in the presence of the village chief and notables this design does not allow me to separate between a "hierarchy effect", capturing behavior in response to potential negative/positive repercussions by the chief and notables to improper/proper game behavior, and behavior in response to a more general "transparency effect".[22] While future work may try to separate out both effects, two remarks are in order here. This study is interested not in the impact of the chief or public scrutiny alone on changes in native-migrant behavior, but their combined effect. Furthermore, in the Congolese setting it is also not realistic to look at both effects separately. As Section 2.2 discussed, migrants are taken up in the the village public scrutiny network which is leveraged by the villages chief and other natives. In extensive debriefings that I undertook after the games, in which each participant was asked for the difference between the two versions of the game, players mentioned especially the hierarchy effect: "The two games are different because one is played in the presence of the chief and he controls our way of life in the village.", "The presence of the chief and the chief of the avenue impacted my play. I am afraid that if I do not give they may punish me, and if I only give to my brother they will judge me." and "Yes, the games are different. During the first game the chief of the center observed me a lot. During the second game we were together, and I only gave to my friends."

[23]Figure 2.3 in the appendix shows the frequency distribution of contributions in private and public, where I separate out the four possible dyads between migrant and native players. When playing anonymously, zero is the modal contribution, accounting for 51% of all dyads. Congolese villagers donate on average 17.7% of their endowment to the other player in private. In public, 40% of the contributions equal zero, and average contribution rates are substantially higher. On average, Congolese villagers give 30% higher in the presence of the village chief, with the mean donation at 23.1% of endowment.

[24]The analysis in this section controls for village level fixed effects in order to avoid that results are driven by village main effects. I also cluster the standard error in two dimensions — by sender and receiver — to account for correlation among the $n-1$ allocations to different receivers by the same dictator and the $n-1$ donations to the same receiver by different dictators (Petersen, 2008; Thompson, 2011; Cameron et al., 2011).

[25]All p-values are equal to zero.

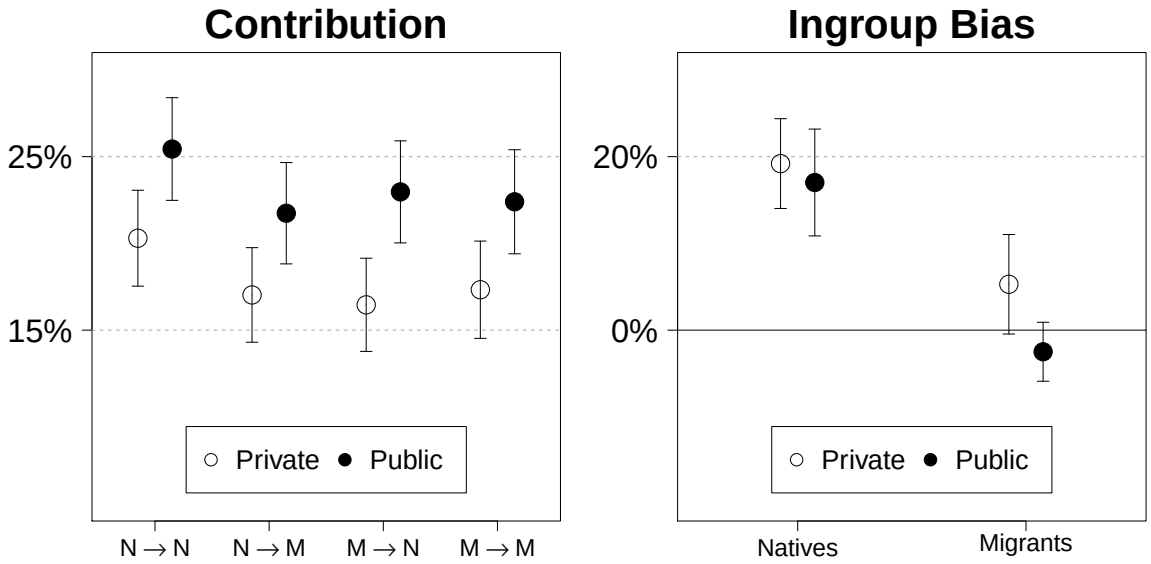
receivers than migrant dictators do (N→N − M→N = 3.8). A formal test finds this difference to be statistically significant (p=0.05). In contrast, I find no evidence that native dictators contribute differently than migrant dictators to migrant receivers (N→M − M→M =-0.03, p=0.84). Those dyads that include a migrant are lower than the native-native dyad, which is the only dyad in the village in the absence of migration. In other words, the presence of migrants is associated with lower average donation levels in the village. Insofar as sorting allows village access to only those individuals that increase average levels of donation, I find empirical evidence that native populations are not particularly successful in screening for good migrants at the gate.

The solid dots in the left panel in Figure 2.1 are the average contributions in the presence of the chief and village notables. Again, contributions in all four dyads are significantly bounded away from zero with average contributions at 25.5%, 21.7%, 23.0% and 22.4%. Average donations in public are significantly higher than those in private: migrants (natives) contribute 29% (28%) more to migrants, and migrants (natives) contribute 40% (25%) more to natives. This result is statistically significant for all four dyads (p=0.00 for all). As a result, local institutions have a strong positive impact on contributions, which is well illustrated in the left panel of Figure 2.1.

One result bears specific emphasis. I find a strong difference in the impact of scrutiny depending on whether the dictator is migrant or native. The right panel of Figure 2.1 shows ingroup bias by dictator type and variation. Consistent with standard theories of in-group bias, I find that in private natives donate 19% more on average to fellow natives than to migrants (N→N − N→M = 3.3). This result is both substantially and statistically significant (p=0.00). Migrants also exhibit such an ingroup bias and contribute on average 6% more to receivers of their own group (M→M − M→N =0.8). The latter, however, is only marginally significant (p=0.07). In public, there is still a native ingroup bias, with natives donating 18% more on average to fellow natives than to migrants (N→N − N→M = 3.8, p=0.00). In public, however, migrants no longer contribute less to natives than natives do.[26] In fact,

[26]In private, native dictators donate on average 23% more to native receivers than migrant dictators do (N→N − M→N = 3.8); in public this decreases to only 10% (N→N − M→N = 2.5). In contrast to the first

Figure 2.1: Average Contributions by Dyad and Ingroup Bias



Notes: Based on 416 dictators and a total of 1,622 (N→N), 1,819 (N→M), 1,819 (M→N), and 1,604 (M→M) dyads per variation.

under scrutiny migrants increase their contributions significantly towards the *outgroup*. While migrants increase their donation by 25% to other migrants, they increase their contribution to natives by 40%. Migrant behavior thus changes from discrimination against to discrimination *in favor* of natives. This reversal is statistically significant (p=0.00), and well illustrated in the right panel of Figure 2.1.[27] That especially migrant behavior towards natives is sensitive to scrutiny is confirmed in extensive debriefings that I undertook after the experimental games. Migrants highlight how they contribute more in order to signal their willingness to be good citizens or because of potential negative consequences for not doing so: "I am displaced, and by giving I prove to the chief my good nature towards the autochthon".

(p=0.05), the latter is not statistically significant (p=0.23).

[27]That is, (M→N − M→M | public) − (M→N − M→M | private)= 0.6 - (-0.8) = 1.4. In contrast, scrutiny has only a moderate effect on native discriminatory behavior: (N→N − N→M | public) − (N→N − N→M | private)= 3.8 - 3.3 = 0.5. In contrast to the first (p=0.00), the latter is not statistically significant (p=0.42).

2.4 The Impact of External Interventions

In response to large population movements, many international organizations implement interventions to assist migrants in host villages. This dynamic is reflected in my research villages, where in all but two of the 24 villages the chief reported having hosted NGOs the preceding six months. With many villagers living at subsistence levels, the funds a village can pool together from its community members is limited. By comparison, resources introduced by NGOs may be substantial and potentially provide villages with the means to absorb incoming migrants. However, rigorously testing the impact of development aid is difficult due to selection effects of development actors choosing to work in certain villages over others. For example, NGOs might choose to work exactly in those villages where migrants face problems to integration, or where the chief is particularly despotic. This study overcomes this problem by building on the exogenous presence of development activity to overcome this potential bias. Between 2007 and 2011, a DFID-funded development intervention was implemented by the International Rescue Committee and CARE International, which was implemented between 2007 and 2011 throughout Eastern Congo — including in 53 villages in the Buhavu chiefdom. The project provided communities with financing of up to $70,000 to distribute resources for livelihood projects, the construction of local infrastructure such as school rooms or clinics, and so forth (IRC (2012)). The villages were selected into the program by a public lottery. A major benefit is that this allows me to make *causal claims* about the impact of development interventions.[28] In order to leverage this benefit, this study's research villages were randomly selected taking into account the villages' treatment status to obtain balance between treatment and control communities.[29] This is illustrated in the right panel of Table 2.1.

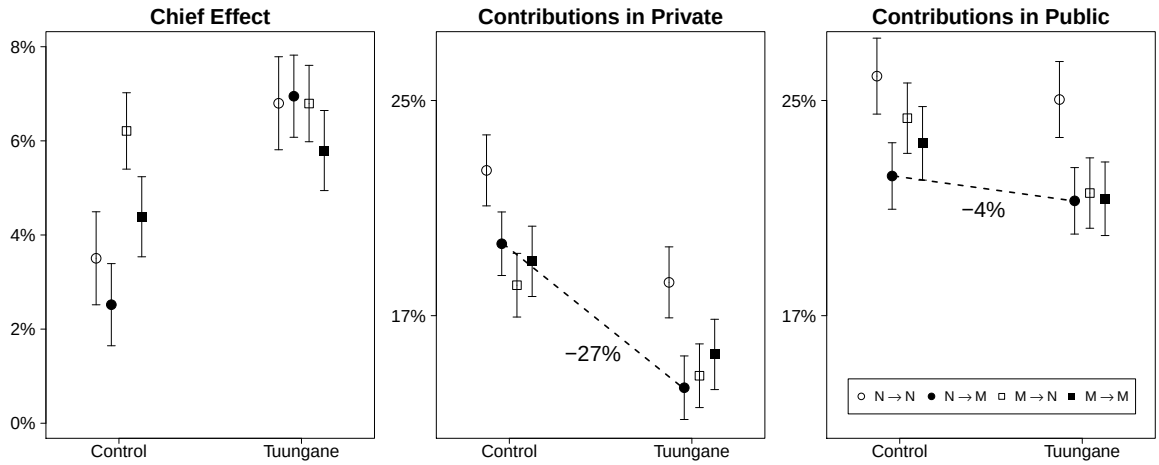
[28] See Humphreys et al. (2015) for more details about Tuungane. They do not find evidence that Tuungane engendered any migration flows.

[29] Even with a small sample, random assignment ensures that simple difference in means provides an unbiased estimate of the treatment effect. Of course with a small sample my power is weak and I can expect the estimates to be more noisy, though this does not threaten unbiasedness (e.g. Mutz and Pemantle (2011); Imai et al. (2008)).

2.4.1 Results

The center panel of Figure 2.2 shows the impact of Tuungane on contributions in private. Migrants decrease contributions by 18% (from 19.0 to 15.6) to fellow migrants and 18% (from 18.1 to 14.8) to natives, as a result of Tuungane. Native contributions decrease by 19% (from 22.4 to 18.2) to fellow natives and a full 27% (from 19.7 to 14.3) to migrant receivers; the latter result is statistically significant (p=0.06) and highlighted in the center panel in Figure 2.2 by the dashed line.[30] I thus find that in private Tuungane had an overall *negative impact* on native-migrant sharing.

Figure 2.2: Tuungane Impact on Chief Effect, and Impact in Private and Public



Notes: Based on 416 dictators. The 95% confidence intervals are constructed from the test whether the average contribution are bounded away from zero.

There are a number of mechanisms that might explain this result. First, it might be that what is at work is a form of neutrality of NGO aid towards otherwise privately pro-

[30]The p-values are 0.12, 0.06, 0.20, 0.21 for the N→N, N→M, M→N and M→M dyad, respectively. All p-values in this section are based on randomization inference (Fisher, 1935). In brief, I first regressed the dyad's contribution on the actual Tuungane status, obtaining the point estimate of the 'true' treatment. I then randomly re-assigned the 24 villages to the Tuungane treatment 10,000 times, and for each of these new (fake) re-assignments I estimate a new point estimate. All together these new point estimates constitute the reference distribution. Comparing the estimate from the true assignment to this distribution makes it possible to calculate the probability that I find the same estimate or stronger in the data. A regression analysis, controlling for village level fixed effects and clustering the standard error in two dimensions, gives the same results.

vided resources. That is, the decrease in contributions can simply reflect a reduced need for sharing because NGO aid substitutes for private contributions. Such a result has been well-documented for the neutrality of government policies toward privately provided public goods. E.g. Roberts (1984), Frey and Oberholzer-Gee (1997), Roberts (1987) and Bernheim and Bagwell (1988). Andreoni (1989) and Andreoni (1990) show that if one assumes some private value to the act of giving, such as receiving a 'warm-glow', then neutrality breaks down, and government contributions to charity will incompletely crowd out private contributions.

However, based on considerable qualitative work in the region, I suggest a different mechanism. The resource curse literature highlights the negative impacts of resource windfalls.[31] In line with this literature, I suggest that NGOs may, contrary to intentions, have a negative impact on native-migrant sharing by strengthening cleavages between migrants and natives within communities. First, resource allocation by an outside party to certain villagers, and not to others, might change the nature of sharing by increasing resentment, which can threaten informal sharing arrangements within the community. Second, a considerable literature has argued for the malleability of social identities. For example, the salience of a particular identity might be formed instrumentally in response to changing social opportunities (Laitin (1986), Posner (2004)). In so far as individuals can leverage their "migrant" identity to obtain discriminatory access to resources, NGOs can promote the continuation of exclusive and rigid migrant identities, inhibiting the integration of new migrants into the village. Qualitative evidence suggests that both reasons might be at play in Eastern Congo. The active exclusion of natives from international aid, while also natives live close to subsistence level, and the faulty process of distribution, is consistently brought up by village chiefs and native villagers, including that this leads to tensions between the native and the migrant populations. For example, the process of inclusion on the distribution lists that are used by NGOs is open to

[31]The "natural resource curse" literature relates windfalls from natural resources with a myriad of worse outcomes such as lower growth rates (Sachs and Warner (2001)) and more conflict (Ross (2004)). See Van der Ploeg (2011) for an overview. The literature on the effects of aid windfalls is more mixed but largely points in the same direction. While Boone (1996) and Rajan and Subramanian (2008) find little evidence for any effect of aid, Djankov et al. (2008) go as far to argue that "aid is a bigger curse than oil (p. 169)." The literature has put forward several mechanisms that explain why resource windfalls lead to worse outcomes, which include rent-seeking activities generated by windfalls (Svensson (2000) and Reinikka and Svensson (2004)) and the reduced need for taxes and thus weak governance (Rajan and Subramanian (2007)).

abuse. While these lists are meant for migrants a small number of well-connected natives are included; those that are rich buy their name on the list. As one village chief illustrates: "NGOs arrive only for the migrants. They make a list who are the migrants. Autochthons are not on the list. The committee hides and then makes the list. Only if you give them money you can get on the list." Migrants also trick NGOs by including more migrants on the list than that there actually exist in the village. One common way to do so is to include multiple people of the same migrant household. The household can then sell the additional resources to native villagers once the NGO has left. As another village chief notes: "The chief of the Butembo [the migrant committee] has list of all migrants in the area. NGOs use these lists for distribution. On these lists people appear two or three times so that the same household receives several times. They then sell it in the evening to the natives. This makes the natives very angry. Migrants keep it or sell it. They never share." These statements resonate closely with the fact that the negative impact of Tuungane (center panel Figure 2.2) is particularly strong for the N→M dyad.

2.4.2 The Impact of External Intervention on Local Institutions

While our understanding of the role of the village chief is limited, development actors frequently adopt a "chiefs-as-despot" view (Mamdani (1996)). This view holds that chiefs act as local despots and actively divert NGO funds for private gain. In response, many NGOs attempt to bypass the village chief when undertaking development activities. Given the important role of the chief to village life, NGOs may subsequently erode the importance of an actor that is key in sustaining sharing among natives and migrants. This might happen directly by circumventing chiefly authority, or indirectly by providing an outside option to resources over which the village chief holds authority. Tuungane was such a program. It was a so-called "community-driven development" program. These programs are characterized by the inclusion and participation of all villagers in order to make local institutions such as the village chief more accountable and inclusive from the bottom-up (e.g. Mansuri and Rao (2013)). In fact, a key component of the Tuungane program was to sideline the village chief

and work directly with the population.[32] By bypassing the village chief, NGOs erode the position of an important local institution.

Do NGOs undermine the village chief? The right panel in Figure 2.2 plots average donations made in public in control and Tuungane villages. In contrast to the private setting, when contributions are made in public there is no strong evidence of Tuungane's negative impact of local sharing. The negative impact of Tuungane attenuates in the presence of the village chief. In public, while average contributions for all dyad types are still lower in Tuungane villages, the differences are substantially smaller and none of the differences are statistically significant.[33] For example, while Tuungane decreased average donations for the N→M dyad by a full 27% (p=0.06) in private, this decrease is only 4% (p=0.41) in the presence of the chief and village notables (indicates in the right panel by a dashed line). This is reflected in the left panel, which shows the impact of local institutions (difference public and private play). All four point estimates increase: the village chief effect is *larger* in Tuungane communities.[34] This effect is strongest for the N→M dyad. To conclude, there is little evidence that international interventions undermine the role of the village chief.[35] In fact, the village chief is able to reverse part of the perverse impact of international interventions on native-migrant sharing.

2.5 Conclusion

A well-developed literature explores how individuals in the developing world depend on informal, sharing arrangements within the village to mitigate negative income shocks caused by the vagaries of such things as health, the weather and conflict. Another key characteristic of the developing world is high levels of internal migration (UNDP (2009)). Despite the large literature on informal, within-village sharing, we know preciously little about how it is

[32] As one village chief noted "Tuungane marginalized the chiefs entirely even though we are interested;... (Humphreys et al. (2015), p. 9)".

[33] The p-values are 0.42, 0.41, 0.26, 0.32 for the N→N, N→M, M→N and M→M dyad, respectively.

[34] The p-values are 0.12, 0.06, 0.38, 0.20 for the N→N, N→M, M→N and M→M dyad, respectively.

[35] This result is supported by Humphreys et al. (2015) who find no evidence that Tuungane had any impact on local institutions.

affected by the influx of migrants.[36] In fact, related literatures—for example, those exploring the impact of diversity—suggest that there are good reasons to believe that the arrival of migrants endangers within-village sharing. This study takes a first step to understand sharing among migrants and natives at the village level. To do so I collect original data in the Democratic Republic of Congo, combining in-depth qualitative work with a large survey and a set of innovative lab-in-the-field experiments.

Importantly, this study investigates the role of two actors without which our understanding of native-migrant interactions would be incomplete. The village chief plays a key role in shaping relations between natives and migrants by 1) acting as a gate keeper, deciding which migrant can and cannot enter the village, and by 2) leveraging his powers to allocate resources necessary for integration (especially land) to those individuals that behave well. To empirically test the impact of this local institution, the aforementioned experiments are implemented with an original variation. The second key player are NGOs. These actors are especially active in areas with high levels of population movements, largely to assist new migrants. This study leverages the random assignment of an international NGO program across villages to make causal claims about the impact of international intervention on native-migrant sharing directly, and indirectly via their impact on the village chief.

This study presents four key results. First, in the private version of the experiment, migration is negatively associated with levels of sharing: 1) migrants contribute less to natives than natives do, and 2) both migrants and natives exhibit ingroup bias: both discriminate in favor of individuals with the same migration status. Empirical evidence thus suggests that natives are not particularly successful in only allowing access to those migrants that increase average levels of contributions. Second, the experimental variation demonstrates the key role of the chief in sustaining high levels of contributions between natives and migrants in the village. Specifically, when the chief is observing game decisions (the public version of the experiment), a setting that better reflects the realities of social interaction at the village

[36] In fact, I know of only one other study that relates within-village sharing directly to migration. Morten (2012) finds that when people can self-insure via migration they have less need for sharing within the village and, as a result, the option to migrate reduces sharing.

level, contributions to sharing increases by both natives and migrants. I find that this impact is so strong for migrants that they reverse from ingroup to outgroup bias: discriminating in the presence of the chief in favor of natives. Third, the data suggests that international interventions have a negative impact on sharing in private. Especially native donations to migrants goes down. Extensive qualitative evidence suggests that this result is largely driven by resentment from individuals that do not benefit from NGO activity (natives) to those individuals that benefit disproportionately from NGO resources (migrants). Finally, many NGOs actively bypass the village chief or undertake actions to weaken their position, in order to prevent the exploitation of migrants by local despots. By combining the experimental variation (to learn about the impact of the village chief) and the random assignment of NGO activity across villages, I can test this assertion directly. I find that local institutions are resilient to change. In fact, by comparing the NGO impact in the experiment's private and the public setting, I find that the village chief is able counteract the decrease in contributions resulting from NGO activity.

Apart from their value for the study on informal insurance mechanisms in the developing world, the arguments advanced in this paper have three additional implications.

The important role for formal state institutions in divided societies is widely recognized in the literature (e.g. Lijphart (1977), Horowitz (1992)). However, we know little about the role and impact of local institutions at the micro level in the absence of the state. This study contributes to the literature by providing micro-level evidence of the role of the village chiefs for native-migrant sharing. Conventional wisdom holds that chiefs are unaccountable despots (Mamdani (1996)). This study joins a recent but growing literature that finds an important and positive role for local, traditional authorities. The findings in this study—that chiefs are not only resilient to change, but also responsible for maintaining high levels of sharing between natives and migrants—are in line with recent empirical evidence suggesting that chiefs command the respect of rural people (Logan (2013) and Humphreys et al. (2015)), and may be particularly good managers of participatory projects (Turley et al. (2014)).

Second, a well-developed experimental literature has documented the important role for

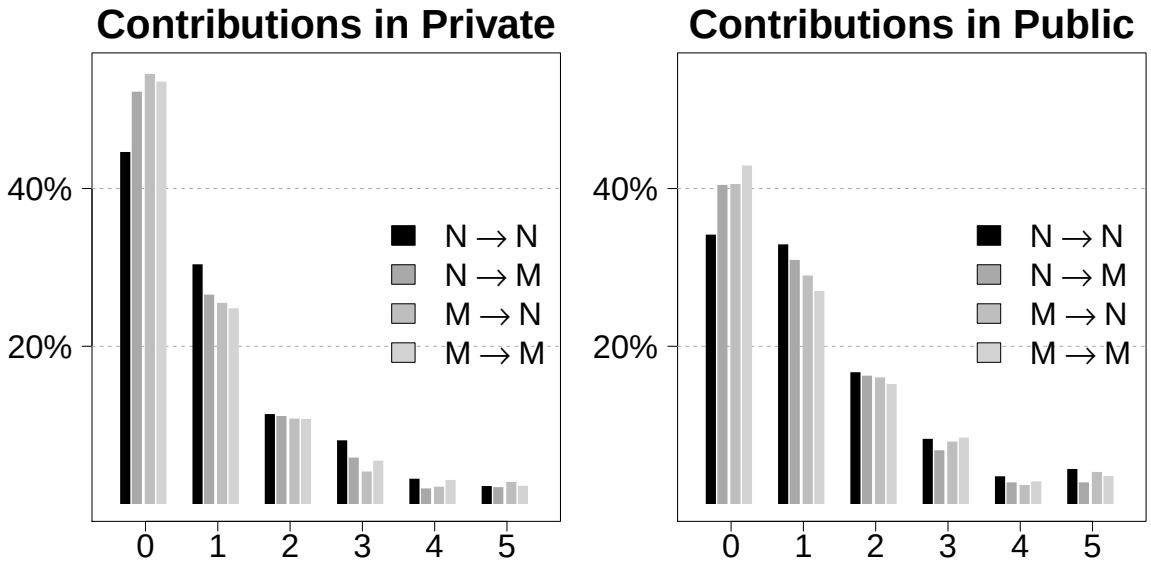
monitoring (and thus the threat of punishment/reward) to sustain cooperation (see, for example, Chaudhuri (2010) for an overview).[37] This paper, which finds differential behavior depending on whether the subjects plays in private or in the presence of the village chief, joins this literature. Importantly, this study finds a striking difference in the impact of monitoring depending on whether the dictator is migrant or native. The scrutiny mechanism we proposed in this study argues that natives submit migrants to a period of monitoring and, in turn, migrants can utilize this ingratiation period to create a favorable standing in the village. In line with this argument, I find that the village chief has a particularly strong impact on the behavior by migrants, who increase their contributions significantly towards the natives. The study thus contributes to the experimental literature, which currently treats monitoring as a largely apolitical technical activity.

Finally, this paper also contributes to our understanding of development aid at the micro level. Since the 1990s a particularly popular model to distribute aid are "Community Driven Development" programs. Mansuri and Rao (2013), for example, estimate that the World Bank alone has spent upwards of $54 billion on CDD initiatives between 1999 and 2011. Building on the chief-as-despot view, the hallmark of these programs are a focus on community participation and the need to reform local institutions. A set of recently completed impact evaluations find few positive impacts of such programs, and that local institutions are resilient to change (Fearon et al., 2009; Casey et al., 2013; Humphreys et al., 2015). I find that international intervention has little impact on local institutions, and that NGO activity might undermine within-village sharing. Combined with results from these evaluations, this study challenges the basis of current international interventions in local social processes and suggests that the ways in which development actors are engaging in aid distribution needs to be rethought. In particular, given the important and positive role of the village chief for within village sharing, I suggest that international interventions should engage and actively work through local institutions.

[37] Classic references here are Fehr and Gachter (2000) and Carpenter (2007).

2.6 Appendix A: Frequency Distribution

Figure 2.3: Frequency Distributions by Dyad and Variation



Notes: Players decided to allocate between 0 and 5 tokens. Based on 416 dictators and a total of 1,622 (N→N), 1,819 (N→M), 1,819 (M→N), and 1,604 (M→M) dyads per variation.

2.7 Appendix B: Details Experimental Games

The experiments were undertaken in the same 24 villages where the census was conducted. The heads of household resulting from the census (Section 2.2), in conjunction with their native/migrant status, were used as sampling frame to select nine native and nine migrant individuals per village. I obtain game-behavior for a total of 416 participants.[38] With the exception of two natives in the first village, this study had no attrition. The reason is that the game participants were selected and invited the day preceding the games. Furthermore, to increase participation, individuals were compensated by 2,000 Congolese Francs; approximately a day's wage for a laborer/farmer in the region. Finally, at the game-day itself runners were sent out early in the morning to collect the players. If a player was not found or could not participate a randomly-selected replacement of the same migration status would be found.

The games were always played between individuals of the same village, and participants played the game in 17 rounds, where each round represented a dictator game with one of the 17 other individuals in the sample serving as the receiver. I obtain 6,930 one-way and 3,465 two-way interactions. This so-called "round-robin" design is another extension by this study to the classic attribute-based dictator game and has two major benefits. First, for each dyad each of the two individuals has an opportunity to serve as the dictator, which allows for direct observation of contribution *towards each other*. Second, instead of one observation per n individuals, this study obtains $\frac{n(n-1)}{2}$ unique two-way dyads, and twice as many one-way dyads.[39] The day before the games were played an instant photograph of each individual was taken. In each of the 17 rounds of the game the dictator was shown a photograph of the receiver, drawn randomly without replacement. For each round, the individual was then

[38] In the first village, the pilot village, 10 individuals (5 natives and 5 migrants) participated. In the subsequent three villages 16 individuals (8 natives and 8 migrants) were selected. It was only after these four villages, when the research team was more experienced, that the number of participants per village could be increased to 18.

[39] A drawback is that donations by a dictator ($i \rightarrow$), to a receiver ($\rightarrow j$), and two individuals towards each other ($i \leftrightarrow j$) are necessarily correlated. To account for this correlation, in addition to controlling for village level fixed effects, all analyses cluster the standard error in two dimensions—by sender and receiver. For a discussion about the benefits of and analysis of the round-robin design, see Sircar and Van der Windt (2015).

asked to allocate a total of 5 tokens between the individual in the photograph and herself. The total allocation to a particular individual at the end of the game was the sum of: 1) the number she kept as dictator over the 17 rounds of the game; and 2) the number of token she received from the other 17 individuals.

Since the participants in the sample knew each other, receivers never learned the dictator's allocation decision in order to forestall any disturbances that could be caused by inferences about how much was donated by others. In order to elicit truthful play, individuals entered into a group lottery that took place after the games for another 2,000 Congolese Francs, where the probability of winning the lottery for each individual was a function of the total allocation accrued to the individual.[40] The only information publicly announced was the identity of the lottery winner.[41] Since the prize represented approximately one day's wages, the award was sufficiently large to generate truthful play. This was confirmed in the de-briefings with participants. Much effort was undertaken to make sure the participants not only understood the lottery, but also the games. Enumerators informed participants individually until the enumerator was 100% sure the participant understood the game play, which included a correct explanation of the game by the player to the enumerator. Furthermore, a de-briefing took place with each of the participants that confirmed a good understanding of the game and the lottery by participants. In addition, to obtain consistency across enumerators the latter were trained for over two weeks by the authors in Bukavu and monitored for three months in the field. Furthermore, a script with the game rules that had to be used verbatim was written in French and Swahili, and also trained in the local languages Mashi and Havu. At no point after explaining the rules of the game was it possible for participants to communicate with one another. Table 2.3 illustrates the sequence of steps in each village. The complete protocol (in French)—including the steps for the census and the verbatim explanation of the games (in

[40] When subject's lottery-winning probability is not independent of the other subjects' (which is the case in this set-up), this could influence game play. This is not a major concern in this study for three reasons: 1) communication was not allowed between players, 2) the percentage of endowment allocated is similar to other dictator games, and 3) debriefing made it clear that people played to maximize their own winning probabilities. I thank Becky Morton for bringing up this issue.

[41] An additional benefit of using a lottery over real money is that the situation were participants keep their endowments during anonymous play in order to distribute it after the games in public is avoided.

French and Swahili)—can be found at: `www.petervanderwindt.com/research/networks/`.

Table 2.3: Sequence of Events per Village

Step	**Event**	
1	Enumerators explain the dictator game to the 18 participants. Participants are then no longer allowed to communicate until everybody has finished the anonymous and public dictator game.	
2	Each enumerator randomly selects one of the 18 participants to be the dictator, and randomly selects whether to play the anonymous or public dictator game first with that dictator.	
3	**Anonymous Game**	**Public Game**
4	Explain the rules until the dictator understands.	Explain the rules until the dictator understands.
5	Emphasize that the dictator plays anonymously.	Dictator has to introduce herself to the village chief and notables.
6	Enumerator randomly selects a receiver and shows the dictator the receiver's picture, and tells the dictator the name of the receiver.	Enumerator randomly selects a receiver and shows the receiver's picture to the dictator and to the village chief and notables, and says out loud the name of the receiver.
7	Enumerator hands 5 tokens to the dictator.	Enumerator hands 5 tokens to the dictator.
8	Dictator decides how much to donate to the receiver.	Dictator decides how much to donate to the receiver.
9		Enumerator says out loud the allocation decision: "X tokens were kept by [*name dictator*] and 5-X tokens were giving to [*name receiver*]."
10	Enumerator randomly draws a new receiver from the pictures that are left, and does steps 6-8 again.	Enumerator randomly draws a new receiver from the pictures that are left, and does steps 6-8 again.
11	After the dictator has made an allocation decision for all 17 receivers (i.e. there are no more pictures left), enumerator conducts the public game with this dictator if not yet played.	After the dictator has made an allocation decision for all 17 receivers (i.e. there are no more pictures left), enumerator conducts the private game with this dictator if not yet played.
12	After this dictator has played both the anonymous and public version of the game (i.e. has made 2 times 17 allocation decisions), enumerator starts at step 2 again until all 18 participants have played.	

Chapter 3

How NGO Activity Impacts Self-Categorization

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Abstract

Billions of dollars are spent each year on development projects. Little is known about whether these resources change how the rural poor associate with available social categories. Is it possible that development projects change how individuals relate to concepts of 'ethnicity', 'low economic status' or any other culturally relevant form of social categorization? I explore this question with original data collected in the Democratic Republic of Congo. By exploiting exogenous variation in the presence of NGO activity across Congolese villages, I offer causal evidence that, paradoxically, development resources make individuals associate more strongly with their 'low economic status' social category — even after the conclusion of the NGO program. To explain this result, I argue that Congolese signal to be poor in order to maximize the probability of obtaining access to development resources. Through repetition, this initially one-off strategic choice is internalized over time. This proposition is corroborated by evidence from a survey experiment among 1,929 Congolese respondents in the same villages. The study thus provides original evidence on the unintended, negative effects of development aid.

3.1 Introduction

Billions of dollars are spent each year on development projects that aim to improve the lives of the rural poor.World Bank alone spent upwards of $54 billion on community-driven development projects between 1999 and 2011 (Mansuri and Rao, 2013), which is just one of the many types of projects undertaken in villages in the developing world. Especially in recent years with the rise of randomized field experiments, academics and implementers have worked closely together to learn about the impact of these projects on a wide range of outcomes: the use of fertilizer (Duflo et al., 2011), household savings (Dupas and Robinson, 2013), disease (Miguel and Kremer, 2004), teacher attendance (Duflo et al., 2012), social cohesion (Fearon et al., 2009), corruption (Olken, 2007), et cetera. One outcome, however, that has yet to receive any attention to date is whether it is possible that development projects change how the rural poor associate with available social categories? That is, do development interventions change how individuals relate to 'ethnicity', 'low economic status' or any other option from their menu of social categories? This study aims to answer these questions based upon original data collected in the Democratic Republic of Congo (DRC). I will offer causal evidence that those individuals in villages that received development resources, paradoxically, associate *more strongly* with their 'poverty' social category. The paper then explores the rational behind this result. By building on a survey experiment and previous work in social psychology, I argue and find evidence that Congolese strategically signal to be poor in order to obtain access to development resources — a temporary activity that is internalized by the rural poor over time.

Understanding whether development projects impact how individuals relate to their social categories — an activity that I term "self-categorization" throughout the paper — is important as the latter has been found to be associated with a number of important outcomes. For example, the relationship between ethnicity and conflict (Esteban et al., 2012b) and public goods provision (Alesina et al., 1999), have been two very active research agendas within the past decade. The Congo is particularly well-suited for exploring this topic. The Second

Congolese War (1998-2003) has been the deadliest conflict worldwide since World War II.[2] Despite the formal end to the war in July 2003, the country, and in particular the South Kivu province where this study's data was collected, continues to be an epicenter of conflict. The conflict in Congo is intricately linked with a number of prevalent social categories, both as a determinant and outcome (this is discussed in detail in Section 4.3). Furthermore, the conflict has resulted in widespread migration movements of the population as individuals flee from on rural village to another. Humphreys (2008), for example, finds that in the South Kivu province a full 71% of household members have fled at least once between 1996 to 2007. Throughout this paper I will distinguish between native and migrant populations for several reasons. First, migrants make up a large subgroup in Eastern Congo, with many Congolese strongly associating with this social category (Section 3.3). Second, the DRC is characterized by numerous ethnic groups, giving rise to concerns of ethnic driven violence, and migration is a key vehicle by which such groups are exposed to one another. In light of these considerations, many development projects are a direct response to the large population movements by either targeting resources to the migrants directly, or assisting the host community as a whole in attempts to increase villages' absorption capacities and facilitate the integration of migrants. Finally, even small development projects are proportionally large opportunities for Congolese given their subsistence livelihoods, making competition for participation in development activities potential sources of conflict. With their lives in flux migrant self-categorization might be particularly malleable by development interventions. Thus, a separate understanding of self-categorization by native and migrant populations is essential. Insofar as successful integration is dependent upon migrants associating themselves as 'a member of the village', or any other social category that both natives and migrants share, this study explores an important indirect effect of development activity.

This paper builds on an original approach to quantify self-categorization, and on two experiments to explore the impact of development activity. Between January and August 2012, face-to-face surveys were conducted with 1,929 individuals from 20 randomly selected villages

[2]Between 1998 and 2003, it is estimated that 3.9 million people were killed, mostly attributed to indirect causes of disease and starvation (Coghlan et al., 2006).

in South Kivu's Buhavu chiefdom. The survey included a section in which each individual was asked to rank five social categories that are particularly salient in the Buhavu chiefdom: 'ethnicity', 'nationality', 'low economic status', 'migrant status', and 'village membership'. This approach thus provides a measure of how Congolese associate themselves into certain categories relative to other categories. To test whether development activity impacts individuals' self-categorization, I exploit the presence of an NGO program that operated between 2007-2012 throughout Eastern Congo, including the Buhavu chiefdom. An investigation into the impact of development activity is normally hamstrung because development actors might choose to work in certain villages and not others. For example, NGOs might choose exactly those villages where migrants face problems of integration. The villages under study, however, were selected into the program by a public lottery. A major benefit is that this allows me to make *causal claims* about the impact of development intervention. In order to leverage this benefit, this study's research villages were randomly selected taking into account the villages' treatment status to obtain balance between treatment and control communities. This study will also zoom in on one specific mechanism that might explain why development activity impacts self-categorization. I will argue that individuals strategically signal their membership of certain social categories over others to development actors, in order to obtain access to resources. To test this proposition, a second experiment was conducted in which the same 1,929 Congolese respondents were primed differently on the strategic opportunities of their self-categorization. As a result, combined with information from months of in-depth ethnographic work in the region and a survey conducted in 2007 and 2012 throughout Eastern Congo, this study is able to paint a nuanced picture of the unintentional impacts of development interventions.

This study contributes directly to the 'resource curse' literature, which has documented the negative relationship between resource windfalls from natural resources with a myriad of negative outcomes such as lower growth rates (Sachs and Warner, 2001) and increased incidents of conflict (Collier and Hoeffler, 1998).[3] Research that explores the effect of aid

[3]See Van der Ploeg (2011) and Nillesen and Bulte (2014) for an overview.

windfalls largely points in the same direction.[4] Nunn and Qian (2014), for example, find evidence that US food aid increases the incidence and duration of civil conflicts, and Djankov et al. (2008) go even as far to argue that "aid is a bigger curse than oil (p. 169)." These studies, however, are largely based on macro-level data. The findings in this study thus provide rare micro-level support for the resource curse.[5] This literature has put forward several mechanisms that explain why windfalls lead to worse outcomes. Foreign aid may: encourage rent seeking and corruption (Svensson, 2000; Reinikka and Svensson, 2004); make recipient governments accountable to their donors rather than to their electorates (Rajan and Subramanian, 2007; Easterly, 2007); lead to the 'Dutch disease' (Adam, 2006); and decrease the quality of public service provision by subtracting skilled professionals from domestic sectors or by changing the role of bureaucrats away from the execution of development functions to obtaining donor funds (Bräutigam and Knack, 2004; Whitfield, 2009).[6] A key contribution of this study is in proposing a novel micro-based mechanism to the resource curse literature.

A second literature that is closely related to this study is that on identity. Rejecting the primordialist thesis that identities are socially or genetically fixed and unchanging, most researchers nowadays assert that identities are constructed. A particularly popular argument is that identity is malleable and can be formed instrumentally in response to changing social opportunities. However, despite considerable research, we still know little about what drives individuals to associate with one identity over another. Posner (2004) provides evidence that the salience of a particular identity ('ethnicity' in his study) responds to whether or not that category can be useful as a vehicle for political competition. And Laitin (1998) documents the emergence of a Russian-speaking national social category among the post-Soviet republics' diaspora populations in response to the introduction of language laws and the collapse of the Soviet Union. This paper contributes to this literature by exploring empirically if and

[4]However, note that Boone (1996) and Rajan and Subramanian (2008) find little evidence for any effect of aid.

[5]The only other, well-identified study focusing on the effect of windfalls at the micro-level that I am aware of is Paler (2013).

[6]Many fewer studies exist that explore the impact of aid at the micro level. Those that exist largely look at the impact of food aid, which has bound found to negatively impact local market prices, community contributions to public goods, and inter-household informal insurance arrangements within communities (see (Barrett, 2006) for an overview).

how a transnational, somewhat temporary actor without any personal interest in reshaping identities has an influential and largely accidental effect on identity.[7]

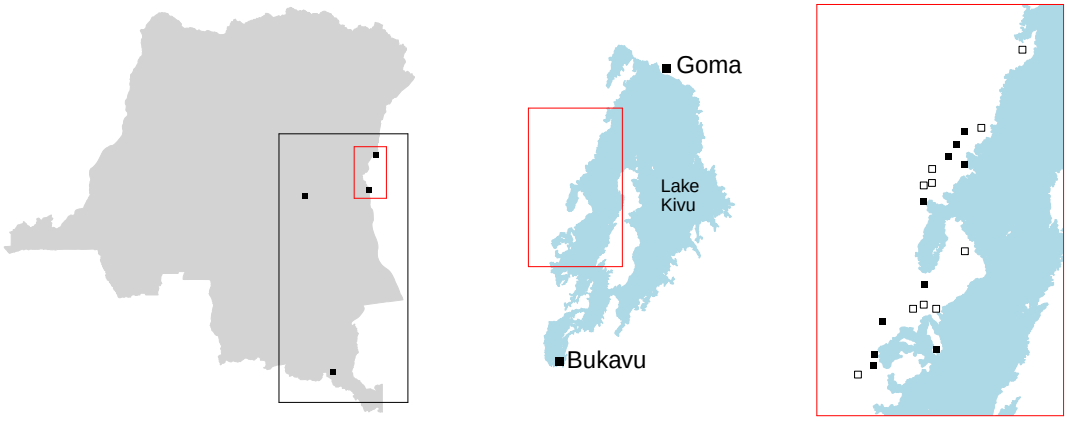
This paper is organized as follows. The next section anchors the study in the Congolese context, introduces how this study measures association with social categories, and the identification strategy to learn about the impact of development interventions. Section 3.3 introduces the sample and explores what characteristics correlate with social categories in the Congolese context. The data provides empirical support for arguments put forward by qualitative scholars on the DRC; e.g. the important relation between land ownership and self-categorization. Sections 3.4 shows that even *after the conclusion* of an NGO program, those Congolese in treatment communities associate themselves more strongly with their low economic status category than those in control communities: migrants in treatment villages are a full 64% more likely to associate strongest with their low economic status category. Importantly, this result seems to come at the cost of integration enhancing social categories: migrants that were exposed to development activity are less likely to relate with village membership and being Congolese. In Section 3.5.3 one mechanisms that might explain this result is explored in detail. Based on an original survey experiment I provide evidence that strategic considerations are one mechanism by which development activity can shape the salience of some social categories over others. Section 3.6 finds that this mechanism also holds in a different dataset and beyond the Buhavu chiefdom. Finally, based upon the data and additional qualitative evidence, I conclude in Section 4.6 that development resources can make the poor 'poorer'. Development interventions can have important, unexpected and worrisome externalities on those living in the developing world.

3.2 Context and Research Design

This section discusses the study's geographical region of research. Next, the five social categories most prevalent within the Buhavu chiefdom are introduced. I then discuss the study's

[7]Throughout this study I will use the word social category instead of identity. Following Chandra and Laitin (2002), identity is the social category that an individual uses to describe herself. See Howard (2000); Fearon (1999); Brubaker and Cooper (2000) for more complete discussions on identity.

Table 3.1: Map Research Area



Notes: Left panel: The Democratic Republic of Congo with the cities (from left to right): Maniema, Lubumbashi, Bukavu and Goma. Small rectangle indicates the study's research site. Large rectangle is the area covered by two other surveys that will be used in this study. Center panel: Lake Kivu. Right panel: The research villages where solid (hollow) squares denote participation (no participation) in the development program (Section 3.2.3). Village names are omitted for identification reasons.

approach to measure self-categorization. This section ends by the study's strategy to make causal claims about exposure to development interventions.

3.2.1 Congo's Buhavu Chiefdom

This study was conducted in twenty villages of Eastern Congo's Buhavu chiefdom.[8] Table 3.1 shows the research area and villages included within the study. In this region, association with certain social categories have historically played an important role for social and economic life. Based on extensive fieldwork and ethnographic interviews I single out the five most predominant social categories that are further discussed below.

The Buhavu chiefdom is part of Congo's South Kivu province, which figures centrally in the violence that has engulfed the country for the last two decades. Located in the

[8]In fact, the survey was part of a census conducted in 24 villages, interviewing 4,015 individuals. The survey assignment used in this study, however, was only introduced after the fourth village. To create a sampling frame I made use of data created together with the International Rescue Committee and CARE International in 2010. The selection of the villages was conditioned on a villages containing at least 25 migrant households as well and basic safety conditions for the surveyors. The sampling frame and the code used for village selection is available upon request.

east, the province was the initial start point for both the First and Second Congolese Wars (1996-1997 and 1998-2003), and continues to be plagued by instability in the form of armed violence in the ongoing Kivus conflict. Throughout this conflict, *ethnicity* has played a key role. The salience of this social category can be traced back to the colonial period. In a form of indirect rule, the Belgian colonists cultivated ethnic based proto-political entities by integrating Congolese into the colonial administrative structure based on pre-existing ethnic cleavages. Land in eastern DRC has traditionally been a communally held good. The stretch of land that a community controlled was largely circumscribed by ethnic identity. Colonial policies that limited access to customary land based on ethnic ties only served to strengthen the preexisting link between ethnic identity and land-access. For those not belonging to the ethnic community, it became extremely difficult to obtain access to land (e.g. Vlassenroot and Huggins (2005)). The importance of ethnicity was further strengthened during Mobutu's patrimonial rule as he instigated ethnic resentment in order to ensure his own survival. Local political leaders started to use ethnicity as a vehicle to mobilize their support, often based on old but unresolved grassroots conflicts over land. Given this entrenched institutionalization of ethnicity, conflicts easily found their groundings within existing ethnic cleavages, making ethnicity an especially pertinent social category of interest.[9]

The effects of the region's history of violence have been far reaching. Basic infrastructure such as roads, schools, and health facilities is lacking in Eastern Congo, due to both destruction and a lack of investment. For example, a 2007 survey conducted in an area of the Congo roughly equivalent to the size of France (outlined with the larger rectangle in the left panel of Table 3.1), found that on average household members have to walk 45 minutes in order to reach drinking water.[10] Furthermore, 77% of respondents in South Kivu believe that their village's economic situation is worse in comparison to neighboring villages, and over 52% believe that economic conditions in their village have deteriorated over the past year. There are thus good reasons to belief that Congolese associate closely *low economic status*.

[9]For a more complete discussion see: Prunier (2009) and Autesserre (2010).

[10]The survey contains information about 21,467 household members (2,906 respondents) drawn randomly from almost 600 villages, and is available upon request.

In part due to high levels of conflict, another key characteristic of Eastern Congo is the prevalence of rural-rural migration. The 2007 survey found that a full 61% of household members have fled at least once between 1996 to 2007 due to armed activities. Such conflict-induced migration has also become a common occurrence within the Buhavu chiefdom in recent years due to sustained armed activity — in particular by the "Democratic Forces for the Liberation of Rwanda" (or FDLR by its French acronym) — and military operations by the government such as the 2009 joint Congo-Rwanda military offensive *Umoja Wetu* against the FDLR, followed by *Kimia II* and *Amani Leo*. Those individuals that migrate due to conflict often move only a few kilometers away from their village of origin — moving to the nearest safe village or to those villages with family members.[11] Thus, within the rural villages studied, *migration status* is likely to be an important social category.

Qualitative evidence suggests that Congolese relate closely with their *nationality*. This observation might be explained by Mobutu's official policy of "Zairianization" (or Authenticité in French) that was widely propagated in the late 1960s and early 1970s. Mobutu's Zairianization campaign was an effort to rid the country of the lingering remnants of colonialism and the continuing influence of Western culture. Zairianization endeavored to create a centralized and singular national identity that could take precedent over regionalism and tribalism (e.g. (Young and Turner, 1985; Kabwit, 1979).

Finally, for most Congolese the arena for daily social interaction is the village. With an average of less than 300 inhabitants, this study's research villages are small and tightly knit.[12] Moreover, a rural Congolese's daily life is principally governed by factors at the village level. Arguably the most important among these is the village chief, who plays a pivotal role in governing a community's day-to-day life. In the 2007 survey, 66% of respondents indicated that the village chief is the most influential person to resolve conflict among villagers. This

[11] The census conducted in the twenty villages (which is discussed in detail in the next section) was specifically designed to learn about migration by collecting complete migration histories for all respondents. The data shows that 92% of all conflict-induced movements originating from Buhavu chiefdom ended in a neighboring village and not an urban center.

[12] To illustrate this fact I randomly selected 18 individuals in each village stratified upon migration status (9 native and 9 migrants). Each individual was shown a photo of the other 17 seelcted individuals to estimate intra-village member recognition levels. On average, two randomly paired individuals have a full 91% chance of knowing each other.

number increases to 80% if village elders and religious leaders — essentially the chiefs' advisory board when it comes to managing village affairs — are also included. Moreover, the chief is the pivotal actor when it comes to land allocation. In fact, the ownership of land and village membership is intricately related. Access to land is not only a function of the availability of resources, but also of an individual's favorable standing in the village. In turn, land is deeply embedded in the social structure of the village and acts as an important tool for integration. Numerous interviews were undertaken by the author with village chiefs, village natives, and migrants in order to learn about migrant integration. Overall, these interviews indicate that the primary vehicle for migrants to become accepted as 'part of the village' is to be granted rights to cultivate agricultural land. *Village membership* is therefore the fifth social category that is explored in this study.

3.2.2 Measuring Self-Categorization

To measure self-categorization this study moves beyond simply asking in how far an individual identifies with a social category.[13] In each of the twenty research villages, the survey conducted included an assignment in which each respondent had to rank order her association with the five social categories previously discussed. First, each respondent was given five slips of paper, each with one of the following statements written on it:[14]

[1] "I am Congolese";

[2] "I am a migrant";

[3] "I am poor";

[4] "I am from ethnic group [group of the respondent]";

[5] "I am a member of the village".

[13]The World Values Survey, for example, asks about how proud respondents are to be a member of social category 'X'.

[14]A detailed list of steps undertaken by the enumerator can be found in Table 3.5 in the Appendix.

Next, the enumerator explains to the respondent that for most individuals, there are multiple applicable social categories simultaneously, but that individuals often associate more strongly with some categories compared to others. The respondent was then asked to place the five slips of paper in rank order starting with the one they most strongly associate with (5) down to that category which they least associate with (1). From this assignment I construct two dependent variables that will be used throughout the paper.[15] The first is the average rank of a specific social category (a variable between 1 and 5). The second is simply whether the social category in question was ranked highest (a binary variable).

Two final remarks in so far as they relate to the dependent variable are in order. First, by construction, self-categorization in this paper is defined in relative terms to the other social categories. The reality that each respondent is likely to fit more than one social category necessitates two underpinning assumptions. The first assumption is that each respondent's self-categorization is both irreflexive and transitive. In other words, the individual does not associate equally strong to more than one social category, and if an individual ranks "I am poor" over "I am a migrant" over "I am Congolese", then the individual also ranks "I am poor" over "I am Congolese". The second assumption is independence of irrelevant alternatives. That is, the rank order of the five categories selected should not be affected by the addition or the removal of another, sixth social category. The second remark is that feelings of association with a social category are likely to vary in intensity over time and context. Conducting the same survey assignment at a different time or in a different context might thus give very different responses. In fact, letting respondents rank their own categories opens the possibility for strategic behavior. The latter is a key interest to this study and I will return to this in detail in Section 3.5.

[15]Having "I am a migrant" as an option might be problematic because, in contrast to the other social categories, some people cannot credibly claim to be a migrant. Three points alleviate this concern. First, less than 7% of the population have never moved. Excluding these individuals from this paper's analysis gives the same results. Second, NGOs are largely unable to distinguish between those with and without a migration history. Finally, the focus of this paper, and the results that drive it, are specific to the migrant population, which I explicitly define as having had a history of migration.

3.2.3 The Exogenous Presence of Development Activity

Rigorously testing the impact of development interventions on self-categorization is difficult due to selection effects of development actors choosing to work in certain villages over others. For example, NGOs might choose to target exactly those villages where migrants face problems to integration. This study builds on the exogenous presence of development activity to overcome this potential bias. Between 2007 and 2011, a DFID-funded development intervention was implemented by the International Rescue Committee and CARE International throughout Eastern Congo — including the Buhavu chiefdom. When the social category data of this study was collected in 2012 the intervention had already concluded. The development project provided communities with financing of up to $70,000 to construct local projects such as school rooms or clinics, with part of this money being received and managed by the communities directly (see Humphreys et al. (2015) for details). The villages were selected into the program by a public lottery. A major benefit is that this allows me to make *causal claims* about the impact of development interventions on self-categorization. In order to leverage this benefit, this study's research villages were randomly selected taking into account the villages' treatment status to obtain balance between treatment and control communities.[16] This is illustrated in the right panel of Table 3.1.

3.3 The Buhavu Chiefdom: A First Look at the Data

In this section I introduce the population being studied, and explore self-categorization in the Buhavu chiefdom and what characteristics are correlated with it. Exploring the latter can be valuable in its own right. For example, learning the correlates of village membership can inform NGOs what factors to target to better facilitate migrant integration. Similarly, shedding light on which factors are negatively correlated with ethnic identity can inform debates related to conflict prevention and resolution in Congo.

[16] Even with a small sample, random assignment ensures that simple difference in means provides an unbiased estimate of the treatment effect. Of course with a small sample my power is weak and I can expect the estimates to be more noisy, though this does not threaten unbiasedness (e.g. Mutz and Pemantle (2011); Imai et al. (2008)).

3.3.1 The Sample

Summary information for the respondents on a set of key characteristics are presented in Table 3.2, where I distinguish between migrants and natives.[17] To begin, I will discuss the composition of the native population. Given that the Buhavu chiefdom is named for its most populous ethnic group, it is not surprising that the large majority (80%) of the natives are Havu. The other three major ethnic groups — the Shi, the Tembo, and the Rwandans (Hutu and Tutsi) —each make up a much small portion of the remaining natives. That rates of migration are high in the Buhavu chiefdom is well-illustrated by the fact that even among natives only 50% of the individuals were born in their current village of residence. Native households are poor and own on average slightly more than one chicken. Finally, even among native households only 48% own a field in the village, a statistic that underscores the limited access to and ownership of land in the Buhavu chiefdom. Turning to the migrant population, migrants and natives differ in important respects. While the Havu still make up the majority of the migrant population (58%), the Tembo, Shi and Rwandans each hold a share of the remaining migrant population of more than 10%.[18] Migrants are even poorer than natives, owning on average less than 0.6 chickens. Finally, and not surprisingly, migrant households have lower access to land, with only one in twelve owning a field in the village.

The bottom four rows of Table 3.2 provide village-level statistics. From the table it can be seen that villages range in size between 126 and 661 inhabitants. In part due to migration, their ethnic diversity is generally high with all villages being composed of more than one ethnic group. Based upon a calculated ethno-linguistic fractionalization index there is on average a 40% chance that two randomly paired individuals from the same village do not belong to the same ethnic group. Finally, the bottom row of Table 3.2 shows that in 18 of the 20 villages NGOs have undertaken activities within the six months preceding the survey,

[17] Throughout this study, I define a migrant as anyone who satisfies two criteria: 1) the individual was not born in the village; and 2) the individual had taken up residence in the village within the last five years. The complement sample consists of natives. This definition is used throughout the larger project on migration of which this study is part.

[18] Many of the migrants in the research villages — in particular the Tembo and the Kinyarwanda-speakers (Hutu and Tutsi) — fled fighting in the chiefdom's Haut Plateaux, a mountainous area to the west of the study area.

Table 3.2: Sample's Summary Information

	Natives					**Migrants**						
Variable	Mean	St.Dev.	Min.	Max	Obs.	Mean	St.Dev.	Min.	Max	Obs.	Diff.	St.Err.
Individual characteristics												
Age (in 10)	4.01	1.55	1.80	9.30	1012	3.35	1.28	1.80	8.60	559	-0.66***	(0.12)
Male	0.52	0.50	0.00	1.00	1029	0.39	0.49	0.00	1.00	582	-0.13***	(0.03)
Havu	0.80	0.40	0.00	1.00	1021	0.58	0.49	0.00	1.00	575	-0.22***	(0.06)
Shi	0.08	0.28	0.00	1.00	1021	0.11	0.32	0.00	1.00	575	0.03**	(0.01)
Tembo	0.04	0.18	0.00	1.00	1021	0.12	0.33	0.00	1.00	575	0.08**	(0.03)
Rwandan	0.05	0.22	0.00	1.00	1021	0.11	0.32	0.00	1.00	575	0.06	(0.05)
Born	0.50	0.50	0.00	1.00	1039	0.00	0.00	0.00	0.00	590	-0.50***	(0.06)
Last entered	9.33	8.35	0.00	58.00	914	2.23	1.58	0.00	5.00	590	-7.10***	(0.42)
Household characteristics												
# Chickens	1.09	2.05	0.00	25.00	963	0.59	1.48	0.00	13.00	572	-0.50***	(0.09)
Swahili	0.96	0.20	0.00	1.00	972	0.98	0.14	0.00	1.00	570	0.02**	(0.01)
Owns field	0.48	0.50	0.00	1.00	1039	0.08	0.28	0.00	1.00	590	-0.40***	(0.05)
Village characteristics												
Pop. (in 100)	2.99	1.35	1.26	6.61	20	na	na	na	na	na	na	na
# Groups	7.70	2.89	2.00	14.00	20	na	na	na	na	na	na	na
ELF	0.40	0.21	0.09	0.76	20	na	na	na	na	na	na	na
NGO	0.90	0.31	0.00	1.00	20	na	na	na	na	na	na	na

Notes: Based on 1,039 natives and 590 migrants. # Chickens and Swahili was not asked in the first village. 'Last entered' is the number of years ago the individual arrived in the village after the last movement; so only for those that moved at least once. One, two or three asterisks indicate, respectively, 10%, 5% and 1% significance levels. Standard errors are clustered at the village level and reported in parentheses.

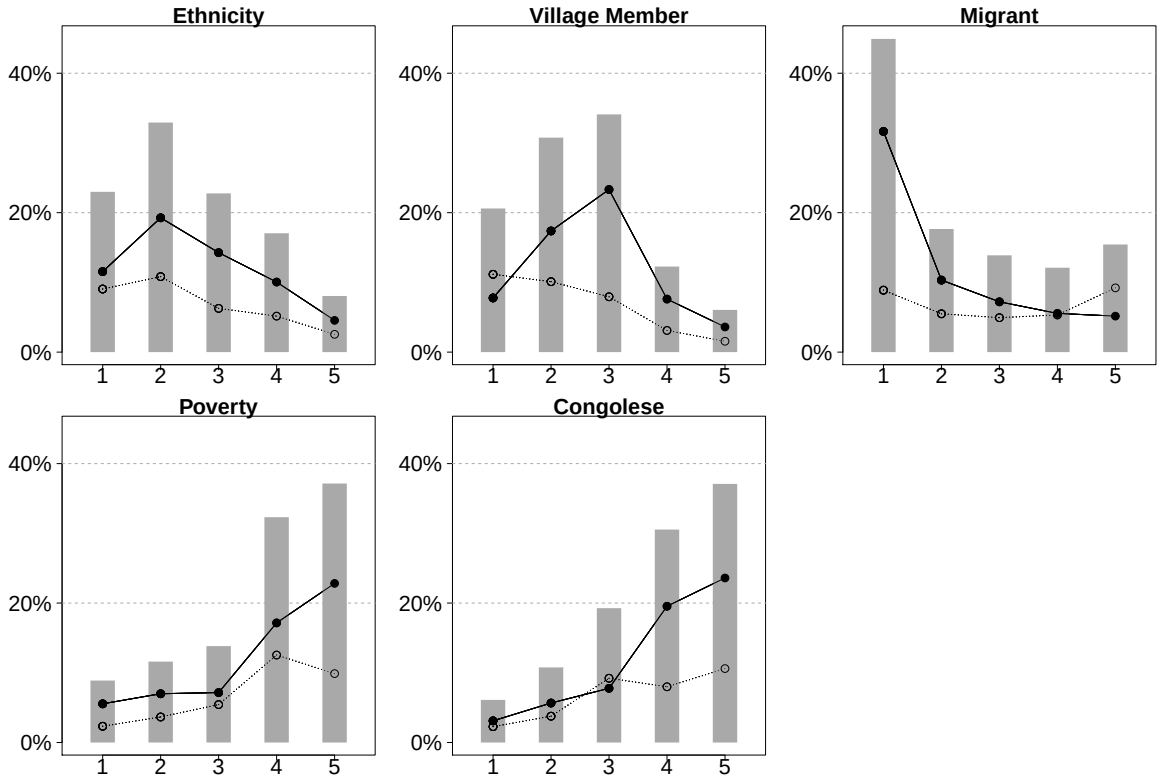
highlighting the prevalence of NGO activity in this area.

3.3.2 Social Categories and Their Correlates

How do individuals in the Buhavu chiefdom characterize themselves? Figure 3.1 plots frequency distributions for each of the five social categories. One result of interest, given the region's history of ethnic fragmentation, is the low number of respondents (7.9%) ranking ethnicity as their most important social category (i.e as a "5"). Only attachment to the social category of village membership received even lower top-ranking responses (5.5%). Being a migrant was top-ranked in 15.9% of responses, higher than both ethnicity and village membership. The two predominant social categories are low economic status (35.1%) and being Congolese (35.6%). Another finding of import is that the distributions of each social category is largely characterized by single peaked preferences, as each identity appears to have a clear

peak (or rank with the highest response level) with response levels falling off to either side of the peak (e.g. Black (1948)). The exception is the migrant category. Individuals have a preference to rank this social category either least important (42.7%) or most important (15.9%). An obvious explanation is that there are large numbers of both migrants and natives in the population. The lines in Figure 3.1 separate self-categorization by migration status, where solid (dotted) lines indicate native (migrant) individuals. Not surprisingly, I find that the definition of migrant used in this study is highly correlated with the migration category, with many natives placing this social category last, and many migrants placing this social category first.[19]

Figure 3.1: Distribution by Social Category



Notes: Bottom axis indicates rank, where "5" ("1") means highest (lowest) ranked. Based on data from 1,629 individuals: 1,039 natives and 590 migrants. Solid (dotted) lines indicate natives (migrants).

[19]Note that while the distribution for natives is single-peaked, this is not the case for migrants. In fact, there are a relatively large number of migrants that place the migration identity last. Further analysis reveals that this result is largely driven by ethnic heterogeneity among migrants.

What factors correlate with an individual's social category choice? Table 3.3 presents results from regressing the individuals' self-categorization on a set of individual, household and village level variables that were introduced earlier in Table 3.2. Results are presented for two types of dependent variable: the average rank of the social category (columns (i)) and whether that social category was placed first or not (columns (ii)).[20]

Table 3.3: Correlates of Social Category

Soc. Category:	Ethnicity		Village Member		Migrant		Poverty		Congolese	
	(i)	(ii)	(i)	(ii)	(i)	(ii)	(i)	(ii)	(i)	(ii)
Age (in 10)	0.02	0	0.05**	0.06	-0.10***	-0.15***	-0.03	0.01	0.06**	0.05*
	(0.02)	(0.03)	(0.02)	(0.05)	(0.02)	(0.02)	(0.03)	(0.02)	(0.03)	(0.03)
Male	0.04	0.06	-0.05	-0.16	0	0.03	-0.13*	-0.18**	0.14**	0.17***
	(0.06)	(0.08)	(0.07)	(0.10)	(0.11)	(0.08)	(0.07)	(0.08)	(0.06)	(0.06)
Shi	-0.16	-0.40**	0.08	0.31*	0.13	0.22	0.13	0.07	-0.14	-0.19
	(0.10)	(0.19)	(0.11)	(0.17)	(0.13)	(0.16)	(0.11)	(0.08)	(0.12)	(0.12)
Tembo	-0.30*	-0.14	-0.53***	-0.21	1.25***	0.92***	-0.05	-0.37*	-0.34***	-0.36*
	(0.17)	(0.22)	(0.09)	(0.28)	(0.13)	(0.18)	(0.22)	(0.22)	(0.11)	(0.18)
Rwandan	0.04	0.04	0.13	0.04	0.01	-0.08	-0.38	-0.42***	0.26***	0.30**
	(0.17)	(0.19)	(0.11)	(0.21)	(0.12)	(0.12)	(0.22)	(0.14)	(0.09)	(0.14)
Born	-0.06	-0.12	0.12	-0.13	-0.26**	-0.32***	0.2	0.25*	0.02	-0.05
	(0.10)	(0.16)	(0.07)	(0.14)	(0.11)	(0.09)	(0.12)	(0.14)	(0.06)	(0.12)
Chickens	0.02	-0.09**	0.01	-0.03	-0.05***	-0.07**	0	0	0.03**	0.04**
	(0.02)	(0.04)	(0.02)	(0.03)	(0.01)	(0.03)	(0.02)	(0.01)	(0.01)	(0.02)
Swahili	-0.2	-0.22	0.13	0.76	0.04	0.18	-0.55***	-0.65***	0.51***	0.58***
	(0.20)	(0.23)	(0.11)	(0.47)	(0.16)	(0.27)	(0.13)	(0.14)	(0.13)	(0.17)
Field	0.23**	0.16	0.34***	0.37**	-0.63***	-0.65***	-0.09	-0.01	0.15*	0.18*
	(0.10)	(0.16)	(0.09)	(0.17)	(0.14)	(0.19)	(0.10)	(0.12)	(0.08)	(0.09)
Pop. (in 100)	-0.05	0.01	0.04	0.11*	0.07	0.12*	-0.06	-0.10*	-0.01	0.02
	(0.07)	(0.09)	(0.03)	(0.07)	(0.06)	(0.06)	(0.06)	(0.05)	(0.04)	(0.06)
ELF	0.97***	0.09	-0.32	-1.07**	-0.33	-0.82**	-0.57*	-0.13	0.26	0.73*
	(0.28)	(0.50)	(0.30)	(0.45)	(0.46)	(0.36)	(0.31)	(0.37)	(0.37)	(0.44)
NGO	-0.43	0.21	-0.18	0.21	0.66***	0.62***	-0.19	-0.41**	0.09	0.06
	(0.31)	(0.31)	(0.11)	(0.22)	(0.20)	(0.23)	(0.22)	(0.18)	(0.15)	(0.21)
N	1,592	1,605	1,592	1,605	1,591	1,605	1,592	1,605	1,592	1,605

Notes: Results in columns (i) are based on a simple regression where the dependent variable is the average rank of the identity. Columns (ii) report marginal effects from a probit regression where the dependent variable is whether or not the social category was ranked first, evaluated at the mean of the independent variables. One, two or three asterisks indicate, respectively, 10%, 5% and 1% significance levels. Standard errors are clustered at the village level and reported in parentheses. Results are robust to different model specifications.

[20]The variable that measures the number of years since the individual's most recent move to the village is excluded from the regression due to a large number of missing observations. Including this variable does not change the results and, not surprisingly, this variable is negatively (positively) correlated with village membership (migration).

The results are largely consistent across columns (i) and (ii). Many variables are associated with self-categorization. To keep the discussion concise, I will only focus on the role of landownership because this has been identified by Congo scholars as pivotal to Congolese social life.[21] Land ownership has been found to be closely linked to ethnic group membership and village membership (Section 3.2.1). Moreover, many scholars argue that "land access and control is one of the root causes of local conflict (Vlassenroot and Huggins (2005), p.116)." Also this paper finds that landownership (variable 'Field' in Table 3.3) plays an important role in how individuals associate with their social categories. In line with previous work on the DRC, I find that landownership and the average rank of the ethnicity category are positively correlated. This result is not significant in column (ii), which likely reflects the fact that land-ownership is also strongly related to the village membership and migrant identities. Compared to those without land in the village, those respondents that own a field are 37% more likely to place "I am a member of the village" highest. These respondents are also 65% less likely to place the migrant category highest. An obvious reason for the latter is that migrant households own fewer fields. Overall, and in line with the discussion in Section 3.2.1, I find that land ownership is positively related with the ethnic social category and categories that are rooted in the concept of belonging (positively with village membership and national identity, and negatively with migrant identity).

The data that has been presented thus far are correlations, I now move to the main part of the study and focus on causal relationships.

3.4 The Self-Categorization Impact of Development Activity

Do development projects change how the rural poor associate with available social categories? The bottom row of Table 3.3 would suggest the answer is yes.[22] There is a strong positive correlation between NGO presence and the migrant social category: individuals in villages

[21] See: Van Acker (2005); Autesserre (2010); Prunier (2009); Claessens et al. (2013). These studies are largely based on qualitative evidence. To the best of my knowledge, this is the first time that the importance of landownership is explored quantitatively in the Congolese context.

[22] 'NGO' indicates those villages that were home to a development project in the six months preceding the survey.

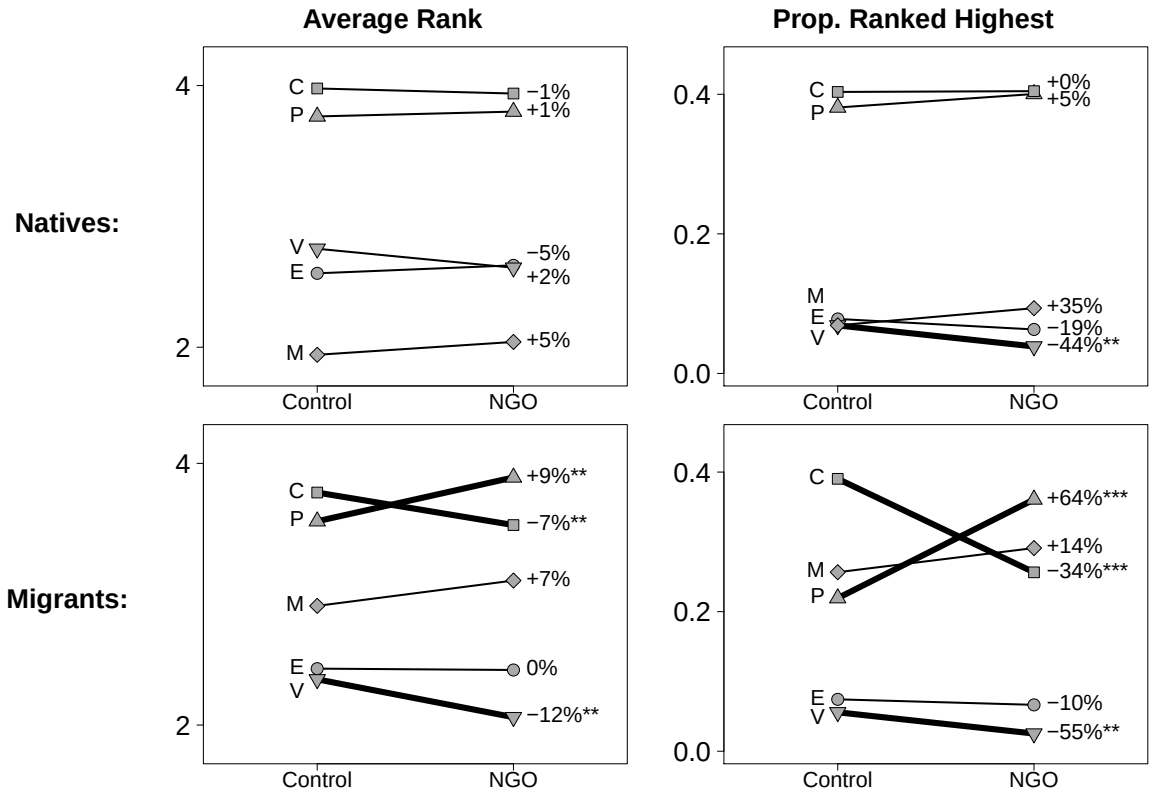
with an NGO, compared to those in villages without, are 62% more likely to place this social category highest. This relationship, however, is not identified. For example, it is possible that the positive correlation reflects the fact that NGOs target those villages with more migrants. In this section I exploit the randomly assigned presence of an NGO program in order to obtain the causal impact of development interventions.

The left column of Figure 3.2 plots the average rank of each social category by NGO treatment status. Bold lines indicate differences that are statistically significant ($p<0.10$), based on simple linear regressions where the dependent variable is the average rank of the identity with standard errors clustered at the village level. The right column plots this information for whether the individual ranks that social category highest, where estimated coefficients are based on probit regressions.[23]

Figure 3.2's top row shows the results for the native population. In the left column, it is clear to see that the migrant social category is on average ranked lowest (2.0). Ethnicity and village membership are ranked higher (respectively 2.6 and 2.7), and both the poverty and Congolese social categories stand out at 3.8 and 4.0. I find similar results when focusing on whether the identity was placed highest (right column), albeit with closer clustering of results for migrant, village, and ethnicity results. The migrant, ethnicity and village membership categories are ranked highest only 7.9%, 5.4% and 7.0% of the time, respectively. "I am poor" and "I am Congolese", on the other hand, are ranked highest 38.7% and 40.0% of the time. Overall, I find no discernible difference in self-categorization between those individuals living in control villages and those that were exposed for four years to the development intervention. The only exception is that those individuals in villages that received development activity associate less strongly with village membership: moving from 6.9% to 3.9% of natives placing this social category first.

[23] As a robustness check I also analyzed the data using randomization inference (Fisher, 1935). In brief, I first regressed the social category's average rank (left column of Figure 3.2) or whether that social category is ranked highest (right column), on the actual treatment status, obtaining the point estimate of the 'true' treatment. I then randomly re-assigned the study villages to the treatment 10,000 times, and for each of these 'fake' re-assignments I estimate a new point estimate. Put together these new point estimates constitute the reference distribution. Comparing the estimate from the true assignment to this distribution makes it possible to calculate the probability that I find the same estimate or stronger in the data. Similar results are obtained.

Figure 3.2: Self-Categorization Impact of Exposure to Development Activity



Notes: E = ethnicity, V = village member, M = migrant, P = poverty, and C = Congolese. Bold lines indicate differences that are statistically significant ($p<0.10$). Left column: Plots the average rank of each social category by NGO status. Estimates are based on simple linear regressions, with standard errors clustered at the village level. Right column: Plots the proportion of individuals that rank that social category highest. Estimates are based on probit regressions.

The bottom row plots the same data but for migrants, and paints a very different picture. Three results stand out. First, compared to natives, migrants place significantly more weight on their migrant social category: being ranked third after poverty and Congolese for both the average rank (3.0) and the proportion of individuals that places this identity highest (27.3%). The noteworthy aspect of this result is that it appears that the importance of this social category for migrants seems to come largely at the cost of the Congolese and village membership identities on which natives place statistically and substantively significantly more weight.[24] Second, NGO activity has a strong impact on how migrants associate with their

[24]This is confirmed by regressing the average rank of category choice on migration status (one if migrant,

social categories. Those changes that are statistically significant ($p<0.10$) are indicated by bold lines. I find that migrants living in villages that were exposed to the development intervention for four years associate more strongly with their low economic status category. Focusing on the right column, while migrants in control villages place this category highest in only 21.9% of the cases, this increases to a full 36.1% in project villages (an increase of 64%). Development interventions thus make the poor 'poorer'. This result is particularly striking given that many development actors in Congo distribute resources explicitly to aid migrants. Third, this results seems to go hand in hand with a decrease in the salience of village membership and Congolese identities, falling respectively 55% (from 5.6% to 2.6%) and 34% (from 39.0% to 25.6%). This finding could highlight a potentially harmful side-effect of NGO activity for migrant integration, insofar as association with the categories of village membership and being Congolese bind villagers together, overcoming cleavages of ethnicity and migration. I will return to this point in Section 4.6.[25]

To conclude, this section offers causal evidence that individuals in villages that received resources from a development project, paradoxically, associate themselves *more strongly* with their 'poverty' social category — even after NGO activities have concluded. The next section explores what might explain this result.

zero if native), and by regressing whether the category was placed highest on migration status. Ethnicity: -0.17 (0.10) and 0.00 (0.01). Village membership: -0.49*** (0.05) and -0.01** (0.01). Migration: 1.02*** (0.11) and 0.19*** (0.02). Poverty: -0.04 (0.09) and -0.09*** (0.03). Congolese: -0.32*** (0.07), -0.09** (0.03). Standard errors in parentheses and clustered at the village level.

[25]There is little evidence that especially the poor are more likely to claim poverty in response to the development intervention. I create a binary variable indicating whether the household is among the smallest 25% of households (household size is generally a good indicator of wealth). Note that it is not possible to create such an indicator using other common indicators of wealth because most individuals are very poor: 69% of households own no chickens, 80% own no field in the village, 81% has only one wife. Regressing whether poverty is ranked first on the NGO treatment status, whether the household is among the poorest households and their interaction, gives the following effects: -0.01 (0.10); 0.09 (0.00); 0.03 (0.38). P-values in parentheses. Similar results obtain when I distinguish by migration status. Furthermore, regressing all four wealth indicators on the NGO treatment status — for the subset of people that ranked low economic status highest — results in the following effects (p-values in parentheses): number of chickens owned: 0.03 (0.45); land ownership: -0.06 (0.25); household size: -0.11 (0.43); number of wives of the head of the household: -0.10 (0.09). Overall, the results suggest it is unlikely that the development intervention binds the poor together.

3.5 How Development Interventions Make the Poor 'Poorer'

There are multiple reasons that could explain why participants, and in particular migrants, are more likely to associate with their low economic status in response to development activity. A first reason is that those in treatment villages, compared to those in control areas, are, in fact, poorer. For example, poorer households might have self-selected into treatment communities (e.g. Rosenzweig and Wolpin (1988)). A second reason can be that although individuals have not become poorer, the wealth of natives increased more compared to that of migrants. This would explain why especially migrants associate more strongly with their low economic status. The data finds no support for the first explanation, and only weak support for the second.[26] A third reason generating the observed differences could lie in the implementing process of NGO activity. Many development actors, in order to know what type of assistance is most beneficial, involve the target population to identify needs. This can take numerous forms such as villager surveys, village meetings, scorecards, etc. By emphasizing what populations lack, these activities have the potential to make individuals more aware of their low economic status. This study is not able to test this third explanation. Instead, the study explores a fourth rational: that individuals behave strategically to obtain access to development resources. I will first introduce this argument, and the survey experiment specifically designed to test this proposition, before providing empirical evidence.

3.5.1 The Strategic Use of Social Categories

Fearon and Laitin (2000) put forth three ways to explain changes in how individuals relate to social categories. The first explanation argues that self-categorization is shaped by broad structural forces such as economic development (Gellner (1983)) and 'print capitalism' (An-

[26]The top eight rows of Table 3.6 in the Appendix compares individuals from treatment and control communities across four wealth indicators: number of chickens owned, land ownership, household size, and number of wives of the head of the household. The table shows that for five (out of the eight) variables measured, the difference between means for NGO villages versus control villages is positive, suggesting that treatment communities are actually richer, not poorer. However, of these five, only the difference in number of chickens owned is statistically significant. Also, Humphreys et al. (2015) find no evidence that the NGO program used in this study engendered migration flows. The bottom four rows of Table 3.6 compares the development impact on the difference of wealth holdings between natives and migrants. While the magnitudes are large, all but one fail to reach statistical significance.

derson (1983)). The second posits that self-categorization is shaped by discursive formations and symbolic or cultural systems (e.g. Geertz (1973)). A third explanation proposes that self-categorization is a function of the actions of individuals seeking various ends: elites construct and manipulate social categories in order to maintain or increase their political power, or these categories are produced and reproduced through strategic action "on the ground" by everyday actions of ordinary people. In line with this latter proposition, Posner (2004) provides evidence that the salience of ethnicity responds to whether or not that category can be useful as a vehicle for political competition. Laitin (1998) documents the emergence of a Russian-speaking national social category among the post-Soviet republics' diaspora populations in response to the introduction of language laws and the collapse of the Soviet Union. The argument that I present to explain the impact of development activity follows this third mechanism closely.

In many developing countries, development actors play a key role in the provision of public goods. They target basic livelihoods and undertake infrastructural projects such as the construction of schools and health centers. The extent of underdevelopment in eastern Congo, with many villagers living at subsistence levels, puts the resources provided by these actors in high demand. This study argues that because of these resources villagers will emphasize those social categories believed to improve their chances of gaining access to those economic advantages offered by development actors. That is, in expectation of development activity, villagers will activate the social category of low economic status, and choose to portray themselves as "in need". The logic behind such strategic behavior is quite rational. Development resources are limited and a development actor targets a limited number of villages, and within these villages often only a subset of the villagers. In order to maximize the probability of obtaining access to these resources, individuals choose to act as if in need towards the development actors. This strategy increases both the chance that the village is targeted, as well as the chance for an individual to obtain resources given the presence of a development actor. The argument that individuals emphasize or play down their economic situation for strategic reasons is not new. Baland et al. (2011), for example, find that individuals in Cameroon

pretend to be poor (at a cost) in order to escape forced solidarity. Empirically this argument implies that individuals choose to present a different social category depending on the identity of the information collector. For example, when asked for their social category by a 'university', instead of an 'NGO', individuals are less likely to choose low economic status because there is lower pay-off in doing so. The idea that individuals' responses are sensitive to the counterpart's identity has been documented in previous studies. Corstange (2014), for example, finds that surveys sponsored by western embassies, in contrast to western universities, suppresses survey participation and makes people more likely to report pro-western policy positions.[27]

Importantly, this study argues that the social category that is temporarily emphasized for strategic reasons can persist over time, reshaping how an individual relates to her menu of social categories. This proposition builds on a well-development literature in social psychology. Self-perception theory finds that self-perception follows behaviors: an individual's association with social categories is determined by interpreting the meaning of her own behavior (e.g. Bem (1967, 1972); Laird (2007)).[28] Development actor-villager interactions can thus be understood as a self-reinforcing system, in that villagers strategically choose low economic status as their social category, which is an action that is optimal given their beliefs about access to resources. At the same time, development actors target those villages and villagers that are most in need and, as a result, the villagers' signal is not disconfirmed.[29] Such a self-reinforcing system of social categories can thus persist over time (e.g. (Laitin, 1998; Mackie, 1996; Fearon and Laitin, 1996)) and make Congolese associate with poverty even when NGOs have concluded their activities.

[27] In line with this argument, Humphreys et al. (2006) show that the identity of discussion leaders influence discussion outcomes. And Cilliers et al. (2014) provide evidence that in rural Sierra Leone generosity is sensitive to the presence of a white foreigner.

[28] Cognitive dissonance theory is closely related and argues that such changes in association occur because of efforts to reduce dissonance (e.g. Zanna and Cooper (1974); Fazio et al. (1977)).

[29] As Abdelal et al. (2005) rightly notes, "because identities are contested, we are well aware that identity language can be used strategically. However, if language is used strategically it will only be effective if at least some important portion of the population has internalized the identity cues and responds to their use (p.12)."

3.5.2 Testing the Strategic Use of Social Categories

To test whether individuals use their menu of social categories strategically, I utilize a survey experiment. Before respondents decided how to rank their five identities, they received a prime about the identity of the enumerator. Specifically, each respondent was randomly allocated to a 'University' or an 'NGO' prime. Before the respondent ranked the five social category slips, the enumerator would read the prime aloud. The text related to each prime can be found in Table 3.4.[30] The NGO prime activates the possibility of access to development resources, while this is absent in the university prime. I thus expect that, compared to respondents that receive the university prime, those that receive the NGO prime are more likely to associate with the low economic status category in order to increase the probability that development actors will target their village.

Table 3.4: Survey Experiment

Prime	**Text**
University	"We are students. We work for Columbia University. We are not here for a development project and we will not distribute anything. We are here for scientific research."
NGO	"We are students. We work for Columbia University. You will not directly benefit, but we will share the results of this research with several large NGOs in Bukavu: for example, the IRC, UNHCR and UNOCHA."

Notes: University and NGO prime. Used a total of 885 and 916 times, respectively. Randomly assigned.

3.5.3 Results

Do Congolese villagers use their social categories strategically? The analysis in this section relies on randomization of the university and NGO prime, which guarantees that both groups

[30] These primes are in addition to a general introduction at the start of each survey in which the enumerators introduce themselves as follows: "I work for a project by Columbia University that investigates why people cooperate with each other. I would like to ask you to participate in the data collection project 'Migration and Networks'. This project is part of the dissertation of Neelanjan Sircar and Peter van der Windt. Both are doctoral candidates at Columbia University. The goal of this project — and their dissertation in general — is not political and not for profit." The survey assignment, and thus the prime, would follow around ten minutes into the survey.

will be similar in expectation. In practice, however, it is possible that both groups differ (by virtue of unlucky randomization). Table 3.7 in the appendix checks for such a possibility; it lists the average for a set of key characteristics by university and NGO prime, and the difference between both. I find that there are no substantive nor statistically significant differences between them.

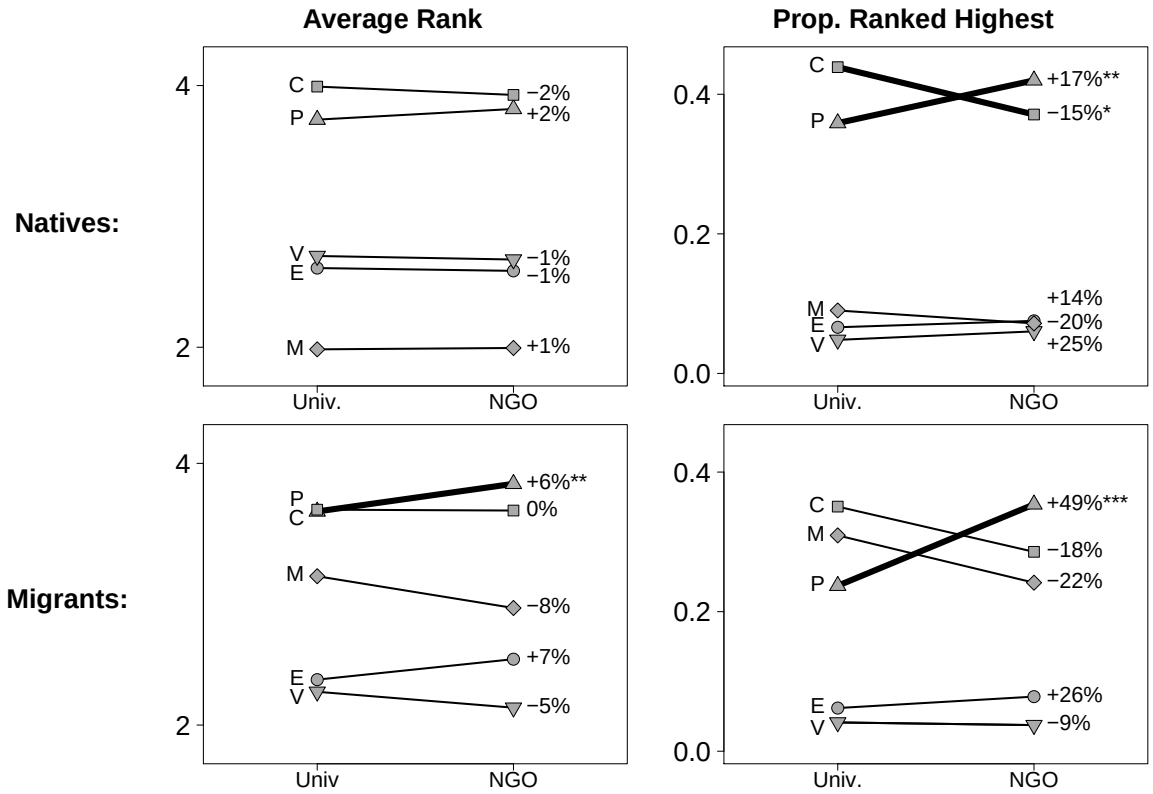
The results are presented in Figure 3.3. The left column plots the average rank of each social category choice, separated by those individuals that received the university prime and those that received the NGO prime. Bold lines indicate differences that are statistically significant ($p<0.10$), based on simple linear regressions where the dependent variable is the average rank of the identity with standard errors clustered at the village level. The right column plots this information for whether the individual ranks that social category highest, where estimated coefficients are based on probit regressions.[31]

The top row in Figure 3.3 shows the results for the native population. In the left column I find no discernible difference in self-categorization between those individuals that received the university prime and those that received the NGO prime. Focusing on the right column, however, I find that the possibility for access to NGO resources has an effect on natives. While 35.9% of the native population ranks poverty highest under the university prime, this increases to a full 42.0% under the NGO prime. The increase of 16.9% is statistically significant ($p=0.02$). Moreover, this increase goes hand in hand with a decrease in the natives' association with their Congolese social category, which decreases from being ranked highest by 35.1% of the natives to 28.6% ($p=0.07$).

Results for the migrant population are presented in the bottom row of Figure 3.3. Two key results stand out. First, while 23.7% of migrants rank poverty highest under the university prime, this increases to a full 35.4% under the NGO prime. The increase of 49.4% is both substantively and highly statistically significant ($p=0.00$). This result is corroborated in the left column. Second, this increase for natives is almost three times as large as the increase in

[31] As a robustness check the data was also analyzed using randomization inference. Similar results are obtained. See Footnote 23.

Figure 3.3: Impact of NGO Prime by Migration Status



Notes: E = ethnicity, V = village member, M = migrant, P = poverty, and C = Congolese. Bold lines indicate differences that are statistically significant ($p<0.10$). Left column: Plots the average rank of each social category by NGO status. Estimates are based on simple linear regressions, with standard errors clustered at the village level. Right column: Plots the proportion of individuals that rank that social category highest. Estimates are based on probit regressions.

the same social category for natives.[32] To conclude, this study finds that Congolese villagers use their low economic status social category strategically. This result is fully in line with the results found in Section 3.4, and is thus one reason that can explain why Congolese, and in particular migrants, are more likely to associate with their low status social category in response to development activity.

[32]I also conduct the same analysis separating out those villages that received the development project, and those that did not. While the difference in effects are not statistical significance, they are — as expected — stronger in the group of villages that has been exposed between 2007 and 2011 to the development intervention.

3.6 External Validity

This study argues that exposure to development interventions leads individuals to strategically signal that they are poor. While the Buhavu chiefdom is similar to most parts of the Congo and the developing world in that villagers live at subsistence level and NGOs are key actors, a centrail question is whether the results hold beyond this study's 20 villages.

To answer this question I make use of survey data collected in 806 villages that were randomly selected throughout Eastern Congo — the larger rectangle in the left panel of Table 3.1.[33] To measure NGO exposure, data was collected on how often a motorbike from a development organization was seen in the village the month preceding the survey.[34] Furthermore, in each village ten randomly selected villagers were asked the following question about their current economic situation: The economic situation of your household is much worse/worse/better/much better compared to [other households in the village]/ [your household in July 2006]?[35] The response to these two questions are open to strategic manipulation by Congolese villagers, and I thus expect a strong, positive correlation between NGO exposure (motorbike sightings) and these two dependent variables.

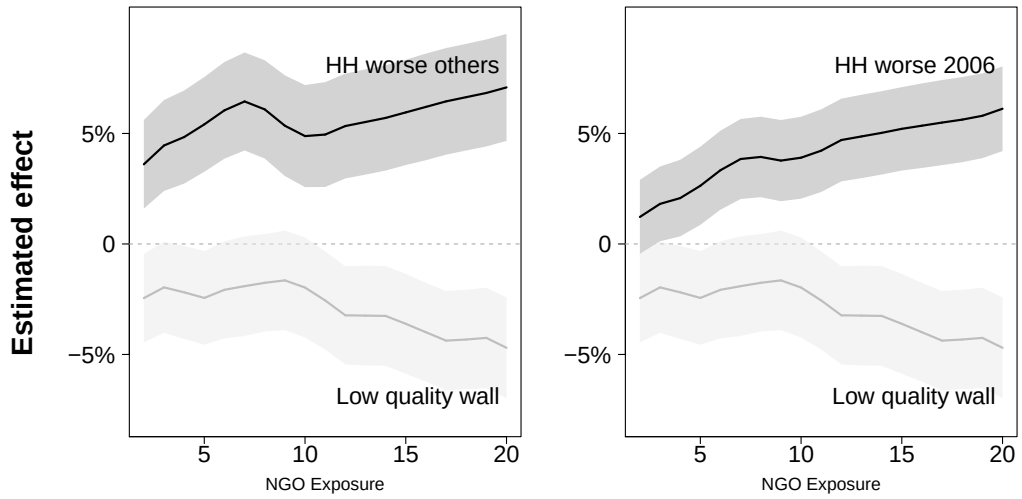
Figure 3.4 presents the results, where the y-axis report estimated coefficients from probit regressions. The dependent variable for the two economic situation questions (top lines) is measured as the proportion of individuals stating that their economic situation is 'much worse' or 'worse'. The independent variable is a dummy variable indicating whether there are more or less motorbikes sighted than x in the village the month preceding the interview, where $x \in \{0, 20\}$. For example, if a motorbike is sighted more than once every two days in the village (point 15 on the x-axis), the individual is around 5% more likely to indicate that the household is worse off than other households — both compared to 2006 status and to

[33]The data was collected in 2012 as part of Humphreys et al. (2015), and is available upon request.

[34]Responses reflect the large presence of NGOs in Eastern Congo: only 42% of the villages reported to have seen no motorbike the previous month, 15% saw a motorbike once, 11% twice, 19% three to ten times, 8% eleven to twenty-nine times, and 5% of the villages saw a motorbike at least once per day. Note that this data comes from the village chief, who might have strategic reasons to misrepresent this information. However, an inspection of the location of the villages that report high numbers of motorbike sightings (GPS locations were collected for all villages) correlates well with other accounts of high NGO exposure areas, including the author's knowledge of where NGOs are particularly active.

[35]Responses are: 11%/57%/31%/1% and 16%/50%/31%/3%, respectively.

Figure 3.4: Strategic Behavior Throughout Eastern DR Congo



Notes: Reports the estimated coefficients from probit regressions. The dependent variable for the economic situation questions (the top lines) is measured as the proportion of individuals stating that their economic situation is 'much worse' or 'worse'. The dependent variable for the wall quality question (bottom lines) is the proportion of individuals with a wall made from mud or plastic. The independent variable is a dummy variable: whether the village had more or less motorbikes sighted than x in the village the month preceding the interview, where $x \in \{0, 20\}$. Errors are clustered at the village level. Based on 6,746 observations. For presentation purposes, the coefficient at x is the average of x, $x-1$ and $x+1$. Gray areas indicates 90% confidence intervals.

other households. The coefficients presented in Figure 3.4 are three month moving averages and thus only start from $x = 3$ onwards. The figure is capped at 20 because of the small number of observations larger than 20. The gray areas indicate 90% confidence interval, with errors clustered at the village level. I find that not only are all the estimates positive, they are increasing in NGO exposure. These results are in line with the argument that exposure to development interventions leads individuals to behave strategically.

One worry, however, which we discussed in detail in Section 3.2.3, is that this result can simply reflect the fact that NGOs operate more in areas that are actually worse off. Figure 3.4 therefore presents a second set of results. In addition to asking questions, the surveyors also reported the quality of the respondents' walls — an indicator of wealth that cannot be manipulated by the respondent. The bottom lines in Figure 3.4 present estimation results

where the dependent variable is the proportion of individuals with a wall made from mud or plastic. The results are the opposite of those found for the strategic behavior-prone questions: exposure to NGO activity is related to better and increasing wall quality. In other words, NGO presence is not associated with worse economic outcomes, which gives confidence that the results presented are driven by strategic behavior, not NGO selection.

In summary, the empirical evidence presented in this section suggests that the key mechanism proposed in this study — individuals strategically signal to be poor in response to development activity — holds not only for the study's survey assignment in 20 villages in the Buhavu chiefdom, but throughout Eastern Congo.

3.7 Conclusion

An aid worker in Congo — or anybody in a white jeep for that matter — will hear "Donnez-moi! Donnez-moi!" ("Give me! Give me!") several times a day by both children and adults alike. This study shows that this is not an innocent expression, but the manifestation of a worrisome externality of development interventions.

This paper argues that the poor prioritize certain social categories — specifically those related to low economic status — in order to maximize access to development resources. This proposition is supported by an original survey experiment conducted with 1,929 individuals in the Buhavu chiefdom of the Democratic Republic of Congo. Following the logic of a self-reinforcing system, I argue that the use of this strategically chosen social category, and the consequent response by development actors, makes individuals internalize the social category over time. To test this claim, this study exploits the randomly assigned presence of an NGO program across the study's research villages. I find causal evidence that *even after the conclusion of the NGO program* those Congolese in treatment communities associate themselves *more strongly* with the low economic status category than those in control communities.

Apart from their own theoretical import for the literatures on resource windfalls and identity, the arguments advanced in this paper have two additional implications.

First, NGOs that operate in the developing world often do so in areas characterized by

limited information. As a result, in order to know where to work, whom to target and with what, these organizations undertake so-called fields assessments — often taking the form of face-to-face surveys in villages to learn about the needs of the villages and their inhabitants. The results from this study's survey experiment should raise warning to the quality of the information collected. I find that even the relatively weak prime used in this study resulted in significant strategic behavior among Congolese.

Second, in many developing countries NGOs play a central role in the provision of public goods. While the guiding principle for development activity is to 'do no harm' (Anderson (1999)), this study finds evidence of an unintended negative side-effect: development interventions can make the poor 'poorer'. Furthermore, in Section 3.4, I found that among migrants this effect went hand in hand with a decrease in the salience of village membership and Congolese identities — two identities that arguably benefit migrant integration. Extensive qualitative work that is based upon in-depth interviews with dozens of natives, migrants and village chiefs, undertaken in the Buhavu chiefdom in 2011 and 2012, supports the proposition that resource distributions by NGOs can reinforce tensions between natives and migrants. As one of the chiefs notes about the migrants in his villages: "We live together, but when distributions are done we do not." This result is particularly striking given that many development actors in Congo distribute resources explicitly in an attempt to aid migrant integration.

That development activity can have unintended, negative effects has been discussed before (e.g. De Waal (2009) and Polman (2011)). De Waal (2004) even notes that the "... side effects commonly turn out to be worse than the problems it seeks to address. (p.158)" In this study rare, causal evidence for these claims is offered.

3.8 Appendix A: Sequence of Steps

Table 3.5: Sequence of Steps

Step	Event	
1	Record the time (hh:mm) on the record sheet.	
2	If the recorded time's last digit is odd, read out the 'University' prime. If the last digit is even, read out the 'NGO' prime. Record the prime on the record sheet.	
3	Now explain the rules to the respondent. "Here are five slips of paper, each with a different identity." One by one, show and explain each of the five slips of paper. "A person can have all these identities. These identities are likely to have a different importance to you. Now it is up to you to place these five identities in the order of how strongly you identity with them.	
4	**University Prime**	**NGO Prime**
	"We are students. We work for Columbia University. We are not here for a development project and we will not distribute anything. We are here for scientific research."	"We are students. We work for Columbia University. You will not directly benefit, but we will share the results of this research with several large NGOs in Bukavu: for example, the IRC, UNHCR and UNOCHA."
5	Now let the respondent rank the five slips of paper in the order of importance to him/her.	
6	Verify with the respondent that he/she understood the task, and correctly ranked his/her identities.	
7	Record the ranking on the record sheet.	

Notes: Sequence of steps undertaken to learn about individuals' identity choice.

3.9 Appendix B: Difference in Wealth by NGO Status

Table 3.6: Difference in Wealth by NGO Status

	NGO villages			Control villages				
Variable	Mean	St. Dev.	Obs.	Mean	St. Dev.	Obs.	Diff.	St. Error
Natives								
# Chickens	1.31	3.16	523	0.94	1.68	511	0.37*	(0.21)
Owns field	0.45	0.50	527	0.55	0.50	512	-0.10	(0.11)
Household size	8.20	5.09	526	7.69	4.44	511	0.51	(0.56)
# Wives	1.25	0.71	481	1.22	0.68	478	0.02	(0.05)
Migrants								
# Chickens	0.65	1.60	340	0.49	1.26	275	0.16	(0.20)
Owns field	0.07	0.25	341	0.13	0.34	345	-0.07	(0.06)
Household size	6.94	3.74	341	6.79	4.05	343	0.15	(0.44)
# Wives	1.14	0.41	320	1.17	0.49	317	-0.03	(0.03)
Natives minus migrants								
Diff: # Chickens	0.58	0.57	10	0.25	0.35	10	0.33*	(0.21)
Diff: Owns field	0.30	0.18	10	0.31	0.19	10	-0.01	(0.08)
Diff: Household size	1.65	1.42	10	1.37	1.15	10	0.28	(0.57)
Diff: # Wives	0.09	0.15	10	0.04	0.10	10	0.05	(0.06)

Notes: One, two or three asterisks indicate, respectively, 10%, 5% and 1% significance levels. Standard errors are clustered at the village level and reported in parentheses. Results in the last four rows are based on randomization inference.

3.10 Appendix C: Balance University and NGO Prime

Table 3.7: Balance University and NGO Prime

	Univ. Prime			NGO Prime				
Variable	Mean	St. Dev.	Obs.	Mean	St. Dev.	Obs.	Diff.	St. Error
Age (in 10)	3.86	1.53	846	3.87	1.55	881	0.01	(0.07)
Male	0.45	0.50	877	0.45	0.50	904	0.00	(0.02)
Havu	0.73	0.44	868	0.71	0.45	897	-0.02	(0.02)
Shi	0.11	0.31	868	0.09	0.29	897	-0.01	(0.01)
Tembo	0.05	0.22	868	0.07	0.26	897	0.02*	(0.01)
Rwandan	0.07	0.25	868	0.08	0.27	897	0.01	(0.01)
Born	0.29	0.45	883	0.30	0.46	916	0.01	(0.02)
Last Entered	6.74	8.01	776	6.48	7.02	784	-0.26	(0.36)
# Chickens	0.87	1.74	834	0.99	2.43	861	0.12	(0.10)
Swahili	0.96	0.21	837	0.96	0.20	868	0.00	(0.01)
Owns field	0.33	0.47	885	0.34	0.47	916	0.01	(0.02)

Notes: One, two or three asterisks indicate, respectively, 10%, 5% and 1% significance levels. Standard errors are clustered at the village level and reported in parentheses.

Chapter 4

Measuring Discrimination at the Local Level

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Abstract

Experimental games are a popular tool to measure discrimination. Ordinarily these games are played between strangers, and players are given little information about the population from which the other players are drawn. In much of the developing world, however, behavior takes place among people that know each other well. This study introduces a novel game to measure discrimination at this local level. We find that classic experimental games do not directly translate to the local level in which basic individual preferences are likely to be swamped by social considerations. We find that this finding is due to an aggregation bias (moving from a known distribution of receivers to full information about each individual receiver), and not a social distance bias (differences in the distribution of the receiver population). We conduct our study in rural Sierra Leone, a context characterized by discrimination based on social status—a factor widely regarded as an important cause of the civil war.

4.1 Introduction

In developed countries, many exchanges occur through impersonal interactions. In contrast, a large literature on the political economy of development finds that in developing countries, local characteristics such as reciprocity and network structure are important determinants governing behavior (e.g. Udry (1994) and Fafchamps and Lund (2003)). This paper proposes a framework and develops a novel method to understand and measure discrimination among populations in which individuals know each other intimately. Second, we explore possible biases implied by traditional methods to measure discrimination at this *local level*.

Starting with Becker (1957), economists have explored the causes and consequences of discrimination. Because the measurement of discrimination is prone to issues such as social desirability biases, recent empirical work has moved away from survey-based evidence in favor of more behavioral based measures. Two strands of literature stand out.[2] First, audit studies and 'kindred' field experiments have evaluated if minorities are treated differently in job application, housing search, vehicle purchases, etc. For example, Bertrand and Mullainathan (2004), randomize the applicant characteristics on resumes to study the impacts for job applications (see also Riach and Rich (2002), List (2004) and Adida et al. (2010)). A second strand has concentrated on laboratory experiments, predominatly relying on the attribute-based dictator game (ADG). Discrimination in the ADG is measured as the difference in allocation by a "dictator" (the sender) to different types of "receivers" that are differentiated by an experimental cue on a particular attribute (for example ethnicity, gender, etc). A central concern with these experiments is that they do not allow for the context in which discriminatory behavior is embedded (e.g. Levitt and List (2007)). First, players do not know anything about their counterparts except for that which is revealed by the experimenter. Second, players are often strangers and do not know each other personally. An allocation decision at the local level, however, also depends on other receiver's attributes and factors such as previous interaction and the social networks in which the individuals are embedded.

[2]Up to recently regression studies were also popular. These models attempt to interpret the implications of say race or gender in an OLS framework, typically in wage models. These studies often use a Oaxaca-Blinder decomposition to interpret the magnitude of findings. See Neal and Johnson (1996) for one such study.

This paper derives a formal and experimental framework to study discrimination based upon differences in knowledge of the social context and the receiver.[3] In particular, we focus on how discrimination varies as a function of the distribution of the receiver population, and how this discrimination changes when moving from a a setting where only the distribution of receivers is known to a setting with full information about each receiver. Our framework applies to discrimination in a wide array of settings, from situations where little is known about participants (e.g. a rental market) to situations where participants know quite a bit about each other (e.g. daily interaction in a rural village in Sierra Leone). We argue that the classic ADG is a good measure of discrimination in the former setting but that an adjusted ADG is necessary for empirical inferences about the latter. In this paper we introduce the revealed-receiver attribute-based dictator game (RDG). This game extends the ADG in two ways to capture behavior at the local level: 1) we reveal the identity of the receiver, and 2) play with subjects who know each other well. To empirically illustrate our framework, we conduct a set of RDG and ADG games at the local level. The latter is implemented with three variations—each with a different level of social distance—which allows us to investigate two mechanisms that might explain differences between the ADG and the RDG at the local level: 1) social distance bias, and 2) aggregation bias. The first refers to differences in beliefs about the overall distribution of relevant attributes in the population (e.g. playing with a group of receivers from the village versus from the country). The second refers to the level of uncertainty a dictator has about the relevant attributes of the receiver (playing with a group of receivers versus playing with those same individuals one-by-one).

We implement the experimental games in a set of small and remote communities in rural Sierra Leone where interactions are predominantly local. Because the reach of government is limited, local elites have great authority to organize economic and social activity, including the power to raise taxes, mobilize labor, settle disputes and allocate resources such as land, labor and reproductive opportunities. It is argued that the exclusionary nature based upon

[3]Discrimination is defined as differential behavior based upon a particular attribute of the other. We will define *local* discrimination as differential behavior based upon a particular attribute of the other *among individuals that know each other*. In the next section we will discuss this in more detail.

social status was an important contributing factor for the 1991-2002 civil war (e.g. Richards (2005)). As a result, our experimental design leverages the importance of social status in rural daily life and takes this as the cleavage for study to understand discriminatory behavior.

Three major results stand out. First, we find a significant difference between the RDG and the ADG. Compared to the RDG, we find that in certain cases the ADG overestimates levels of discriminating in the local context by a factor of almost ten. Second, we show that the difference between both games is mainly driven by the aggregation bias, and not social distance bias. What is important for discrimination in behavior is a dictator's knowledge of the receiver, not her knowledge about the distribution of receivers. Finally, a major benefit of the RDG is that—in contrast to the ADG—we are able to investigate the importance of characteristics other than only the attribute under study. In fact, the result that discrimination is based upon social status largely disappears when the researcher also controls for receiver and dyad characteristics.

We believe this study investigates a fundamental question concerning how to study human behavior across settings. While current methods allow researchers to isolate underlying behavioral preferences without contamination by social considerations, this abstraction ignores the social dimension of behavior that could easily swamp the importance of personal preferences in highly socially connected societies. In real life, as Levitt and List (2007) rightly argue, behavior also depends on other receiver's attributes and factors such as previous interaction and the social networks in which the individuals are embedded. Such factors we expect to be particularly important determinants of discriminatory behavior at the local level; that is, among individuals that know each other intimately and have regular interaction. In this paper we introduce a new tool to the experimental literature that allows for a better extrapolation of lab experimental results into real-world behavior at this local level.

This paper is organized as follows. In the next section we present currently popular methods to measure discrimination, and we discuss how they relate to behavior at the local level. In section 4.3 we introduce the Sierra Leonean context and outline our experimental design. Section 4.4 presents our results. We explore additional benefits of the RDG to learn

about behavior at the local level in Section 4.5. Section 4.6 concludes.

4.2 Measuring Discrimination at the Local Level

4.2.1 Local Discrimination and a Novel Way to Measure It

We define local discrimination as differential behavior based upon a particular attribute of the other *among individuals that know each other*. In this section we relate this concept to the literature on discrimination and popular methods to measure it.

Statistical discrimination takes a prominent position in the literature on discrimination.[4] A key feature of statistical discrimination is limited information. Firms, for example, have limited information about the skills of job applicants, which gives them an incentive to use easily observable characteristics correlated with productivity (such as skin color or gender) to infer the expected productivity of applicants. It is thus not surprising that also the methods used to measure discrimination are characterized by limited information. For example, in the audit experiments discussed earlier, employers know little more about the job applicant than what is revealed in the resume (Bertrand and Mullainathan (2004)). Limited information also plays a key role in experimental games.[5] Because these games are the focus of this paper, we will discuss this in more detail.

Among experimental games the attribute-based dictator game (ADG) is the workhorse model used to understand behaviors related to discrimination. The game takes a single player, the sender, and asks her to split a fixed sum of money, the endowment, between herself and another person, the receiver. The sender is under no obligation to donate any money to the

[4]Classic references are Aigner and Cain (1977), Phelps (1972), and Arrow (1973). The second type of discrimination that has received attention in the literature, although to a much lesser extent, is taste-based discrimination. Taste-based discrimination describes a situation in which individuals have an inherent prejudice towards a certain group of people. This prejudice is part of the utility function and may reflect dislike, anger, or similar emotions (Fershtman and Gneezy (2001)). For example, in Becker (1957) employers have a 'taste for discrimination', reflected in their disutility from employing workers that have a certain attribute such as being black or women.

[5]Fershtman and Gneezy (2001) is one of the few studies that tries to isolate taste-based and statistical motives for possible discrimination. Taste-based discrimination is measured using differential behavior by the dictator in a dictator game. Statistical discrimination is measured using the trust game, where the statistical discrimination reflects the players' assessments of the differing reactions of members of groups to their actions. Also these games are characterized by limited information. The two ethnic groups under study, Ashkenazic Jews and Eastern Jews, are identifiable only via the name of *unknown* individuals (similarly to Ahmed (2010)).

receiver.[6] Before the allocation decision the sender is given some experimentally-controlled "cue" regarding the receiver and no other information, and then plays the game at least twice—each time with a different type of receiver. For example, a researcher interested in discrimination based on social status would design an experiment in which the dictator would have to split a fixed sum of money once between herself and a "high status individual", and a second time between herself and a "low status individual". The difference in contribution is then a measure of status-based discrimination. Limited information is a central characteristic to these experimental games because the dictator knows little more about the receiver than what the experimenter reveals, which is in most cases only the cue under study.[7] The ADG has been used to show discriminatory behavior based on various cleavages: gender (Holm, 2000), ethnicity (Whitt and Wilson (2007), Fershtman and Gneezy (2001)), and partisanship (Fowler and Kam, 2007).

This paper argues that neither the concept of statistical discrimination nor our current methods to measure discrimination relate well to behavior at the local level. The principal reason for this assertion is that social interaction at the local level is not characterized by limited information about the other individuals in the population. The intuitive empirical interpretation of the classic ADG, and other measures of discrimination such as the audit studies, is that it measures the extent of discrimination between random strangers with no, or very limited, information about the receivers' attributes beyond those under study. These studies therefore relate well to the concept of statistical discrimination, and to situations where little is known about the other party beyond a limited amount of information, such

[6]Predictions based on standard Nash equilibria, assuming individuals are purely interested in personal financial gain, are that the dictator will keep all of the money for herself. Empirically, however, one finds that 60% of dictators donate a positive amount of money towards the receiver, with a mean transfer of around 20% of the endowment (Camerer (2003)). This suggests that people have more complex preferences than personal financial gain, what is typically referred to as exhibiting "other-regarding preferences" (Fehr and Schmidt (1999) and Bolton and Ockenfels (2000)). For a critique of this interpretation see List (2007).

[7]The original setup of (attribute-based) dictator games entailed informing the dictator that the receiver was behind a closed door so that no attributes of the receiver affected the decision of the dictator. The goal of many early studies was simply to demonstrate the inadequacy of utility functions that only assume interest in personal financial gain (e.g. Kahneman et al. (1986)). A set of more recent studies do reveal more about the receiver than only the cleavage under study: e.g. (Habyarimana et al., 2007; Binzel and Fehr, 2013; Ligon and Schechter, 2012; Leider et al., 2009; Burnham, 2003; Charness and Gneezy, 2008; Bohnet and Frey, 1999; Croson, 1996). In most cases, however, these games do not mimic the local context with either the receiver not fully revealed, or the subject pool being strangers. See Sircar et al. (2014a) for an overview.

as the housing or the job market. In contrast, members of say a small village in rural Sierra Leone, know much more about each other than only the experimenter's attribute under study. Furthermore, behavior between these villagers is guided by previous experiences with each other. Finally, these villager's behavior also depends on their position in the village's social network, and how they relate with other third villagers. Levitt and List (2007) argue how by suppressing such factors, the measurement of discrimination by classic experimental games is likely to result in different levels of discrimination than actually present in real life.[8] We argue that this is the case especially at the local level.

4.2.2 Differences in the Measurement of Local Discrimination

This paper proposes a novel experimental game to study discrimination at the local level. Specifically, we introduce what we call the revealed-receiver attribute-based dictator game. This game differs from the ADG in two ways: 1) the identity of the receiver is revealed to the dictator, and 2) subjects know each other well. Second, we implement an experimental framework in the field that allows us to investigate in detail the possible biases that may result from using a classic ADG to measure discrimination at the local level. That is, in addition to playing the RDG, all dictators also play a set of attribute-based games. The latter are classic ADGs in that the dictator only knows the cue under study, in our case social status. Each dictator played three variations of the ADG in which we differed the receiver population: the dictator's contributions towards a random individual from the chiefdom (ADG-C), the village (ADG-V), or one of the other $n-1$ participants that also play the game (ADG-P). An overview of the experimental framework is given in Table 4.1, but we leave a detailed discussion of each game to Section 4.3. By moving game-by-game from the ADG-C, what we argue would be the classic measure of discrimination, to the RDG, our novel measure for local level discrimination, we explore whether different game setups obtain different estimates of discrimination. Furthermore, this experimental framework allows us to distinguish between

[8] Levitt and List (2007) propose that divergences may be caused by (i) the stakes of the game (ii) the presence of moral and ethical considerations, (iii) the extent to which one's actions are scrutinized by others and the nature of such scrutiny, (iv) the subject pool of respondents and (v) the context in which the decision is embedded.

two mechanisms that might cause differences in behavior between the ADG-C and the RDG: 1) social distance bias, and 2) aggregation bias.

Table 4.1: Experimental Framework

		Receiver Population		
		Chiefdom	Village	Participants
Revealed Receiver?	No	ADG-C	ADG-V	ADG-P
	Yes	.	.	RDG

Notes: We implement two sets of games: the anonymous dictator game (ADG) and the revealed-receiver dictator game (RDG). The ADG is conducted with three different receiver populations: a randomly selected individual from the chiefdom (ADG-C), the village (ADG-V) or the other $n-1$ participants (ADG-P).

Social Distance Bias. Social distance bias refers to sensitivity of behavior to knowledge about the distribution of receivers. Specifically, in this paper we consider this bias to be the difference between the behavior of the dictator in the ADG with respect to a population frame with which she is less familiar (ADG-C and ADG-V) compared to one from the local context (ADG-P).[9] To illustrate this bias, imagine the following thought experiment. An experimenter interested in discrimination towards the homeless, might decide to conduct an experiment in which the dictator is asked to split an allocation of 5 utils towards herself and a "homeless", and once again to herself and an individual that is not homeless (a "resident"). A difference in contributions is interpreted as discrimination based upon homeless status. First, assume that the dictator, a resident, lives in a neighborhood (the local level in this example) that has two homeless and two residents. In this setting the dictator prefers to contribute 2 utils to the homeless, because a small contribution makes it unnecessary for the homeless to steal. On the other hand, she does not care about a hypothetical homeless at say the national level; in this case she prefers to keep all 5 utils. Assume that in both cases the dictator prefers to keep 5 utils when the receiver is a resident. This simple example illustrates how the simple cue "homeless" might invite the social distance bias if the experimenter is

[9]Social distance bias has received considerable attention in the experimental literature: e.g. Etang et al. (2011) and Charness and Gneezy (2008). Note that our description incorporates the definition by Hoffman et al. (1996), p. 654, who define social distance "as the degree of reciprocity that subjects belief exist within a social interaction."

interested in discrimination at the local level. The experimenter might conclude incorrectly the absence of discrimination, while, in fact, at the local level residents discriminate strongly in favor of the homeless (2 utils). In Table 4.1 this bias is reflected by moving along the top row: comparing results from classic ADG games with different receiver populations.

Statistical discrimination is central to all three types of the ADG (top row of Table 4.1): while the distribution of the receiver population is different in each game, all games have in common that the dictator only learns about one attribute of the receiver. The two right-most cells in Table 4.1 have the same population of receivers, but the RDG is not characterized by statistical discrimination. Because dictators play with revealed counterparts that they know intimately the game is no longer characterized by limited information. The dictator knows more about the receivers than only the cleavage under study. Moreover, other factors that are important for her allocation decision—such as previous experience with the receiver and their relationship inside the social network—are all fully known to her. The RDG therefore gives us the measure for local discrimination: the difference, by cleavage under study, in average over all the individual contributions. If only statistical discrimination is at play, averaging over the individual contributions in the RDG should give the same result as the ADG-P. However, it is possible that there is a difference because of, what we will call, the aggregation bias.

Aggregation Bias Given the same population of individuals about whom the dictator knows all the attributes, the aggregation bias refers to the difference between moving from playing against the group of individuals (ADG-P) to the average of playing against each individual separately (RDG). Classic experimental games are played with a hypothetical player from a group of potential receivers. For example, in the previous two games the donation is to somebody from the group of homeless, and to the group of residents. Classic games assume that each individual in each of these populations has an equal probability to receive the dictator's donation. At the heart of the aggregation bias is the fact that a researcher cannot directly infer behavior towards an individual from behavior towards a group of individuals. Again, consider our thought experiment. Assume the dictator—one of

the two residents—plays the revealed-receiver dictator game. She therefore plays three times: one time she has to split 5 utils between herself and homeless #1, a second time between herself and homeless #2, and a third time between herself (resident #1) and resident #2. In this setup the dictator plays one-on-one with receivers that are known to her (they are all from the same neighborhood). Let's explore her behavior towards the homeless. Assume that homeless #1 has recently mugged the dictator. The contribution in the RDG might therefore be: 0 utils to homeless #1, and 4 utils to homeless #2. If the dictator contributes 0 utils to the resident, the level of local discrimination is 2. What is the dictator's contribution if the dictator had played an ADG with these two receivers, where randomly either homeless #1 or #2 receives the allocation? The answer is not necessarily 2 utils. For example, because of the mugging the dictator may dislike contributing to homeless #1 to such an extent, that she is willing to place a lot of weight on the 0 utils allocation, even at the cost of homeless #2. That is, she prefers to punish homeless #1 more than to reward homeless #2. In this case, the contribution to the homeless in the ADG will be less than 2 utils. Similarly, a particularly positive relationship with one individual does not necessarily imply a positive relationship towards the group of individuals with the same characteristic.

The aggregation bias therefore states that the inability of the experimenter to take into account the dictator's intensity of preferences over the receiver population, may lead to an over or under estimation of discrimination at the local level by classic experimental games.[10]

In what follows we set out with two objectives. First, we test whether a traditional attribute-based dictator game leads to different estimates in the measurement of discrimination at the local level (comparing ADG-C and RDG). Second, we explore whether the

[10] A well developed literature in psychology has found that behavior towards an individual is different from behavior towards a group (e.g. Hamilton and Sherman (1996)). A particularly prominent research agenda is the "identified victim effect", which find that individuals behave more generous towards identified victims than towards unidentified or 'statistical' victims (Jenni and Lowenstein (1997)). Small (2003) and Kogut and Ritov (2005), for example, find that when comparing dictator behavior when a) the receiver will be a randomly chosen from a group of 20 unknown individuals with b) the receiver is a person that is already chosen (but still unknown to the sender) from a group of 20 unknown individuals, contributions are significantly higher in the latter case. Our empirical measurement of the aggregation bias (the difference between ADG-P and RDG) thus also captures those motivations put forward by psychologists that drive differences in play towards a person versus a group: i.e. individual's expectation of unity, consistency, and coherence that lead to differences in impression formation (Hamilton and Sherman (1996)). Importantly, and in contrast to our games, the experimental games underlying these concepts are conducted among strangers.

difference can be best explained by the social distance bias (comparing ADG-C, ADG-V and ADG-P) or the aggregation bias (comparing ADG-P and RDG). In our pre-analysis plan we posited the following hypothesis:

> ***H:*** Compared to classic experimental games, measured discrimination (based on social status) will be significantly different when revealing the local context.[11]

4.3 Context and Experimental Design

4.3.1 Context: Rural Sierra Leone and Social Status

To explore differences between the ADG and the RDG in estimating discrimination at the local level we implement our framework in the seven chiefdoms surrounding Sierra Leone's Gola Rainforest National Park. In rural Sierra Leone interaction takes place at the local level. Villages in our research area, as in most of rural Sierra Leone, are small with an average population size of 222.2 individuals divided over an average of 28.4 houses.[12] It is thus not surprising that villagers know each other.[13] To illustrate this fact we randomly selected 16 individuals in 96 villages and asked each of them how they are related to the other 15 individuals. We find that on average two randomly paired individuals have a full 25% chance to be family. In fact, only 14% of the individuals respond that none of the other 15 individuals are family. Not only do villagers know each other, in rural Sierra Leone the

[11] In our pre-analysis plan we conjectured neither a direction nor a magnitude. We posited that, compared to the ADG-C, discrimination is either larger or smaller in the RDG (the negative and positive contact hypothesis). Furthermore, we expected that within group interaction (high-high and high-low) can either be competitive or cooperative, and across group interaction (high-low and low-high) can be either generous or selfish. Finally, we put forth a village-based and an identity based discrimination hypothesis: conjecturing a difference between ADG-C and ADG-V, and ADG-V and ADG-P, respectively. The latter two thus reference to the social distance bias. Three notes are in order in so far as they relate to departures from the pre-analysis document. First, the registered design did not make any claims related to aggregation bias. Second, for statistical analysis we suggested to explicitly model the correlation structure in accordance with round-robin social relations data. While not reported in this document — we report results from simple clustering in two-dimensions — using this approach yields similar results. Finally, the document suggested to control for several variables (gender, age, income, ethnicity, religion, migration status) in the analysis to reduce the variance of our estimates. While not reported, doing so does not change the results.

[12] Based upon data collected in 2010 in 176 randomly selected villages from the seven chiefdoms surrounding Gola Rainforest National Park. These numbers are in line with successive national censuses (1963, 1984, 2004).

[13] This has also been observed in areas characterized by high levels of population movement (Sircar and Van der Windt (2015)).

arena for social interaction is the village and governance takes place at the local level. One important reason for this is that the weak central government apparatus runs in parallel to a powerful local chieftaincy system. The latter has its origins in the system of indirect rule created by the British. The country's paramount chiefs serve for life once appointed or elected (by a restricted electorate) and exert considerable control over resource allocation, including land and labor; they operate the local court system that presides outside the capital; and organize the provision of many local public goods (Acemoglu et al. (2014)). For example, some of the most important determinants of rural Sierra Leoneans' households' well-being such as basic public goods—road maintenance, communal labor, self-help groups, control of crime and school infrastructure—are not provided by the government, but through collective action at the local level (e.g. (Glennerster et al., 2013; Casey et al., 2013)).

The cleavage under investigation in this paper is social status.[14] We choose this cleavage because of the important role it plays in Sierra Leonean society. Specifically, society in rural Sierra Leone is governed by an intricate system of patron-client relationships between high and low status villagers, where villagers depend on a highly exclusionary set of traditional institutions if they want to access property and gain political rights. The system has historically created a large class of excluded, low status individuals (mostly young men). These individuals cannot access political rights by appealing to the modern state, for it is nearly non-existent in rural areas. But they also cannot do so by appealing to traditional authorities if they lack patronage by those higher up in the hierarchy (Fanthorpe (2001)). Many scholars of Sierra Leone argue that the enforced community labor, harsh fines imposed by chiefs, and the lack of opportunities that accompanied this system created feelings of disenfranchisement and resentment among rural youth, which on its turn was a major contributing factor to the outbreak of civil war (Richards, 2005, 1996; Fanthorpe, 2001; Fanthorpe and Maconachie, 2010; Sawyer, 2008). For example, Humphreys and Weinstein (2008) show that the Revolutionary United Front (RUF) found much popular support under predominantly students

[14]We are not the first to investigate experimentally the role of social status for cooperation. For example, Baldassarri and Grossman (2013), based upon a set of lab-in-the-field experiments in Uganda, find that people's social position is an important factor in explaining variation in levels of generosity.

and farmers protesting against the recurrent marginalization and humiliation by rural elite. There is evidence that these grievances have persisted in the post-war period (Mokuwa et al. (2011)). Studying the presence and extent of social discrimination is thus of key importance in the Sierra Leonean context.[15]

4.3.2 Experimental Design

During spring 2013, we conducted our experimental games with a total of 736 participants from 46 villages in Sierra Leone.[16] The villages in turn were randomly selected from a larger set of villages located close to the Gola Rainforest National Park in southeastern Sierra Leone. These villages have in common that they are remotely located and have seen little exposure to markets. For individuals in these villages the social arena of interaction is local. We stratified the selection of the 16 players by status in order to obtain the same number of high and low status individuals. Specifically, we first selected the eight highest status individuals in the village—we used the Mende term "Taa Gbakoi", which typically includes the village chief, town speaker, village imam, women's and youth leader. From the "Nu Gbamei"—literally "person of nothing' in Mende—we randomly drew eight individuals.[17]

In private, each participant was interviewed by a research assistant and completed both the experimental games and a short exit survey.[18] The research activities were implemented by multiple teams, each with one instructor and five research assistants. Much effort was undertaken to make sure the participants understood the games. The research assistants were extensively trained and we ran several pilot tests to ensure that our participants understood the experiments. Also, each participants was informed, among other things, that upon completion of the session they would receive a show-up fee of 1,000 Le (or US$0.25), plus a

[15] A set of experiments conducted by Cilliers et al. (2014) in Sierra Leone, find that the presence of white foreigners has a positive impact on generosity, especially for players who have a lower social status in their community.

[16] In all villages we randomly selected 16 players.

[17] Local elites are generally referred to as "Nu Muwa" in Mende (literally "big person"). However, it not appropriate to ask for these individuals and we therefore choose to use the term "Taa Gbakoi" which is closer in meaning to a town official. Both concepts are very close though, and there is a considerable overlap between both. Based upon discussions with Paul Richards.

[18] The enumerators conducted multiple research activities. In this paper we only report the results of the allocation games and individual surveys.

payment based on a randomly selected allocation decisions by the player. The total set of activities lasted about half an hour per participant, and on average participants received an amount equal to about half a day's wage.

Following Table 4.1, each participant partook in the four versions of the game—ADG-C, ADG-V, ADG-P, and RDG. We randomized the order in which each version was played to prevent contamination of the results by learning effects. For each allocation decision, we ask participants to share part of an endowment of 25 tokens, each worth 100 Le. Related to the ADG the dictator made a total of six allocations decision: one for each status type (high or low status) and three types of prime about the receiver, where the receiver is asked to allocate a share of their endowment to a random and anonymous person from 1) a randomly chosen village in their chiefdom, 2) their village, and 3) the sample participating in the experiments. The exact wording that the enumerators used verbatim per version is listed in Table 4.2. For the RDG, each dictator made a total of $n-1$ allocation decisions, each time with a different receiver. Specifically, dictators were told the name of the receiver and, in order to distinguish individuals with the same name, also the receiver's parents' names. The exact wording can be found in the bottom row of Table 4.2. This design allows us to explore differences between the ADG and the RDG. Comparing results from the ADG with different receiver populations allows us to investigate the importance of the social distance bias, while comparing the RDG with the ADG with the same receiver population (ADG-P) allows us to learn about the aggregation bias.

Finally, our research assistants undertook an exit survey with each individual after their allocation decisions. In this survey we collected additional data on participant characteristics (age, gender, education, etc.). As a result, we thus have this data for both the senders and the receivers. The exit survey also included an extensive set of questions related to dyadic characteristics. Specifically, we asked each player about their relatedness to each of the other players along a set of eight dimensions—family, friends, trust, production, social, etc. In contrast to the ADG, the RDG allows an experimenter to investigate the importance of these individual and network characteristics in explaining discriminatory behavior. We will do so

Table 4.2: Text per Treatment

Game	Message to the dictator before allocation decision
ADG-C	"The person receiving the money is a randomly chosen [Taa Gbakoi (e.g. village chief, an imam, a division head, a societal head, a town speaker, etc)] / [Nu Gbamei (e.g. farmer, youth, etc) not a Taa Gbakoi] from a randomly chosen village in your chiefdom, not from your village."
ADG-V	"The person receiving the money is a randomly chosen [Taa Gbakoi (e.g., village chief, an imam, a division head, a societal head, a town speaker, etc)] / [Nu Gbamei (e.g., farmer, youth, etc) not a Taa Gbakoi] from your village. He or she may or may not be have come with you today from your village."
ADG-P	"The person receiving the money is a randomly chosen [Taa Gbakoi (e.g. village chief, an imam, a division head, a societal head, a town speaker, etc)] / [Nu Gbamei (e.g. farmer, youth, etc) not a Taa Gbakoi] from the people from your village that came with you today from your village."
RDG	"The person receiving the money is [Full Name]. His/her father is [Full Name], and his/her mother is [Full Name]."

Notes: The classic dictator game (ADG) is played in three variations with each participant, and the revealed-receiver dictator game (RDG) is played $n-1$ times with each participant (i.e. each time with a different receiver).

in Section 4.5.1.

4.4 Results

In this section we first introduce our participants, and then explore discrimination at the local level. That is, the players' behavior in the RDG. We then compare these results to behavior by the same participants in the ADG-C, the classic attribute-based dictator game. We find large differences across these two games. Leveraging our experimental framework—i.e. comparing behavior between the three ADG games, and between the ADG-P and the RDG games—we find that this difference is mainly driven by the aggregation bias.

4.4.1 Descriptive Statistics and Local Discrimination in Sierra Leone

A total of 736 individuals played the classic and revealed-receiver games: half of them are high status, and the other half low status. In Table 4.3 we compare both types of participants on a set of key characteristics. Not surprisingly, we find that high status individuals are on

average almost 16 years older, more likely to be male, and have larger farms.[19] Unexpectedly, but not statistically significant, we find that high status individuals are poorer (as measured by the number of chickens) and are less likely to be literate.

Table 4.3: Summary Information by Social Status

	High Status (sd)	Low Status (sd)	Difference (se)
Age	50.26	34.70	15.57***
	(15.57)	(11.32)	(1.06)
Gender	0.78	0.52	0.26***
	(0.41)	(0.50)	(0.04)
Stranger	0.12	0.18	-0.06**
	(0.33)	(0.39)	(0.03)
Farm Size	2.46	2.18	0.28**
	(1.62)	(1.80)	(0.13)
Chickens	4.14	4.53	-0.39
	(4.22)	(7.82)	(0.65)
Literate	0.19	0.22	-0.02
	(0.39)	(0.41)	(0.04)

Notes: In the first two columns, standard deviations are provided in parentheses. Standard errors related to the difference tests are clustered at the village level and reported in parentheses in the last column. Based on data for 736 participants.

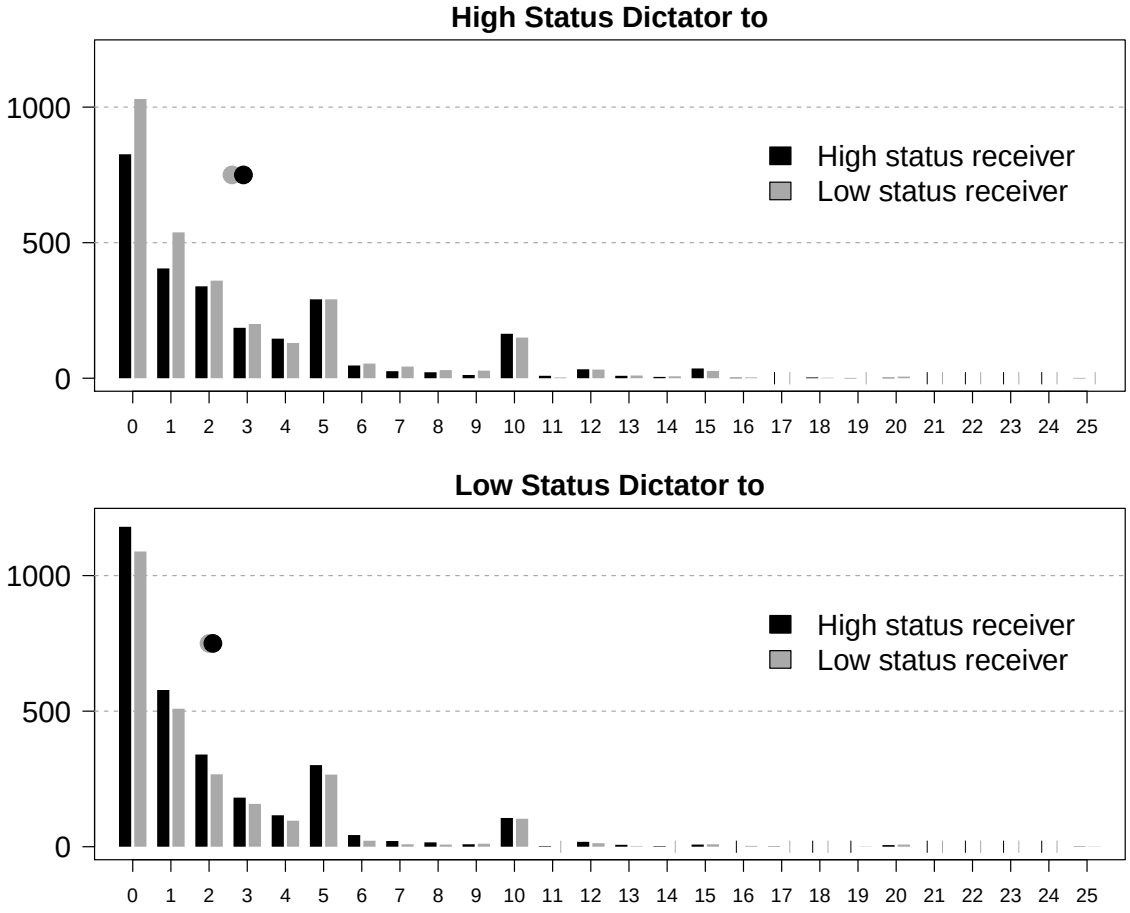
Next, we provide an overview of the contributions in the revealed-receiver game by individuals' social status. The top panel in Figure 4.1 presents a histogram of the amount contributed by high status dictators to high and low status receivers. High (low) status receivers are indicated by black (gray) bars. The RDG was implemented following a round-robin design where each player makes an allocation decision towards each of the revealed $n-1$ other players. As a result, we have a total of 5,509 contributions by 368 high status dictators; of which 2,565 to high status individuals and 2,944 to low status individuals.[20] The average contribution is 2.91 (11.6% of endowment) to high status individuals, and 2.62 (10.5%) to low

[19]Strangers is a widely used concept in Sierra Leonean society and refers to individuals born in another chiefdom often lacking local land rights, except by marriage affiliation. Farm size is measures as the number of bushels of upland rice planted the previous year.

[20]The number of dyads do not add up to 5,888 (16*368) because individuals do not contribute to themselves. Moreover, in a few cases we miss an observation.

status individuals.[21] We will return to this difference below. The bottom panel presents the same information but now for low status dictators. In total there are 5,511 contributions by low status dictators; of which 2,936 to high status individuals and 2,575 to low status individuals. The average contribution is 2.11 (8.4% of endowment) to high status individuals, and 2.01 (8.0%) to low status individuals.[22] For both types of dictators the modal contribution is zero: of the high status individuals 33% gives zero, and of the low status 40%.

Figure 4.1: Distribution of Contributions for the RDG, by Dyad



Notes: Contributions are between 0 and 25. Black (gray) bars indicate contribution to high (low) status receivers. Top panel based on 2,565 (2,944) contributions to high (low) status people; bottom panel based on 2,936 (2,575) contributions to high (low) status people. Solid black (gray) point is the average contribution to high (low) status receivers.

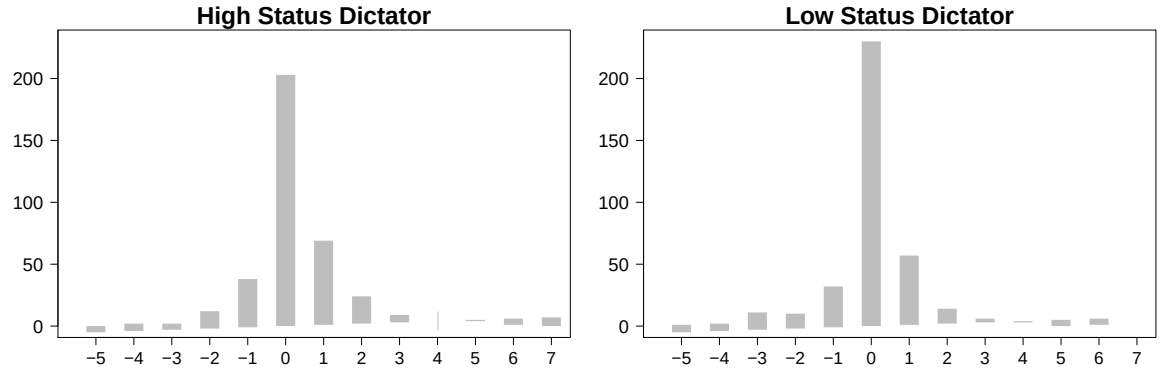
[21] The standard deviations are respectively: 3.56 and 3.39.
[22] The standard deviations are respectively: 2.91 and 2.97.

Next, we explore whether there is *within dictator* variation in contributions based on the receivers' social status. To do so the left panel in Figure 4.2 shows whether high status dictators, on average, contribute less, equal or more to other high status receivers compared to low status receivers. The x-axis is measured as the average contribution to high status receivers minus the average contribution to low status receivers.[23] The right panel does the same for low status dictators. From the left panel we see that high status dictators have a preference to give more to fellow high status individuals. Overall, 51% of the high status dictators give, on average, more to fellow high status players than to low status individuals, and only 26% give more to low status receivers. Furthermore, not only do a larger number of high status individuals give more to other high status individuals, the difference in contribution is also larger: those that contribute more to high status individuals contribute 4.12% (1.03/25) of the endowment more, while those that contribute more to low status individuals only contribute 3.44% (0.86/25) more. Interestingly, we find similar results for low status individuals. Low status dictators have a preference to contribute to high status individuals. While 32% of the low status dictators contribute on average more to fellow low status receivers, 41% of low status dictators contribute more, on average, to high status receivers. Moreover, although the difference is small, those that contribute more to high status receivers contribute more on average than those that contribute more to low level receivers: 3.76% (0.94/25) compared to 3.52% (0.88/25).

We now move to the measurement of local discrimination in Sierra Leone. Table 4.4 presents individuals' behavior in the four games, and a comparison between them. The fourth column and the first four rows of Table 4.4 present average contributions in the RDG separated out by dyad type. For example, the dyad HL indicates the contribution by a high status to a low status individual. The standard errors are reported in parentheses and reflect the test whether the average contribution is bounded away from zero. The fourth column and the last two rows of Table 4.4 show the level of discrimination. We measure discrimination as the difference in contribution between situations where the dictator and

[23]For presentation purposes we rounded this difference to its nearest integer.

Figure 4.2: Distribution of Contributions in RDG Game



Notes: Based on a total of 736 dictators (half high status, half low status). X-axis is the average contribution to high status receivers minus the average contribution to low status receivers.

receiver are the same status and where they are from different status groups (Fershtman and Gneezy (2001)). In other words—using the notation of this paper—we are interested in the difference between HH and HL, and between LL and LH. Consequently, $HH - HL$ ($LL - LH$) is discrimination by a high (low) status dictator. To account for village main effects, all analyses control for village level fixed effects. Moreover, in order to account for correlation among the $n-1$ allocations to different receivers by the same dictator and the $n-1$ donations to the same receiver by different dictators, the standard errors are clustered in two dimensions—by sender and receiver.[24]

Focusing on the fourth column in Table 4.4 (the RDG game), three results stand out. First, contributions in all four dyads are positive and significantly bounded away from zero. Second, with an average contribution of around 11% of their endowment, high status individuals contribute overall more than those with a low status who contribute on average around 8%. Third, we find evidence of local discrimination based on social status. High status individuals discriminate in favor of members of their own group: contributing 11.3% more to high status than to low status individuals. As we can see from the penultimate row this result is statistically significant ($HH - LL = 1.14$, p-value<0.01). Interestingly, we find a similar

[24]See: Petersen (2008), Thompson (2011), and Cameron et al. (2011).

result for low status individuals who discriminate also in favor of high status individuals. While the difference is smaller we still find that low status dictators contribute 3.4% more to high status individuals than those of a low status ($LL - LH = -0.27$, p-value<0.05). These results seem to relate well to more anthropological accounts of rural society in Sierra Leone, which emphasize the importance of social status and patron client relations. We will return to this result in Section 4.5.1.

4.4.2 Estimating Discrimination at the Local Level

The principal argument made in this paper is that in contrast to the RDG, the current techniques to measure discrimination (the ADG) are not well-suited for the local level. In this section, we test whether there is indeed a difference between both types of games, and leverage our experimental design to explore whether this difference can be attributed to the social distance or the aggregation bias (Section 4.2).

We first investigate behavior as measured by the classic ADG and compare that to the RDG. The first column of Table 4.4 shows results for the ADG-C: the ADG in which the dictator is told that she is matched with a high/low status individual from her chiefdom. Average contributions in all four dyads are positive and significantly bounded away from zero: contributions are 15.30%, 12.59%, 11.26%, and 13.89% of the endowment for respectively the HH, HL, LL and LH dyad. The eighth column tests the difference in contribution between the ADG-C and the RDG directly. We find differences in contributions between the two games, with players contributing systematically more in the ADG-C for all four types of dyads. Moving to discrimination, we find strong differences between the RDG and the ADG. The bottom two rows of the eighth column suggest that discrimination is systematically overestimated in the ADG-C. The true level of local discrimination by high status individuals—as measured by the RDG—is 1.14; i.e. high status individuals contribute 1.14% of their endowment more to fellow high status individuals than to those of low social status. An experimenter trying to measure local discrimination with a classic ADG (the ADG-C), however, would conclude incorrectly that local discrimination by high status dictators is a

2.72% of their endowment. Low status individuals contribute 0.27% more of their endowment to high status individuals in the RDG, which increases to a 2.63% in the ADG-C. These difference are thus not only statistically but also substantially large, with the ADG-C overestimating levels of discrimination at a factor of 2.4 and 9.7 for respectively high and low status individuals.

Table 4.4: Participant Behavior in the Experimental Games

	Results by Game				**Comparison ADGs**			**Comparison ADG vs RDG**		
	ADG-C	ADG-V	ADG-P	RDG	ADG-C ADG-V	ADG-C ADG-P	ADG-V ADG-P	ADG-C RDG	ADG-V RDG	ADG-P RDG
Contribution by dyad										
HH	15.30***	15.17***	14.09***	11.61***	0.13	1.22	1.09	3.63***	3.56***	2.43***
	(0.82)	(0.45)	(0.43)	(0.69)	(0.81)	(0.75)	(0.73)	(0.72)	(0.67)	(0.62)
HL	12.59***	12.17***	12.32***	10.54***	0.41	0.3	-0.17	2.03***	1.63**	1.78***
	(0.71)	(0.42)	(0.40)	(0.67)	(0.53)	(0.57)	(0.64)	(0.62)	(0.68)	(0.58)
LL	11.26***	10.73***	10.38***	8.04***	0.55	0.88	0.33	3.26***	2.71***	2.37***
	(0.74)	(0.39)	(0.38)	(0.53)	(0.63)	(0.57)	(0.56)	(0.63)	(0.56)	(0.53)
LH	13.89***	12.55***	12.12***	8.29***	1.34**	1.81**	0.47	5.56***	4.23***	3.80***
	(0.81)	(0.44)	(0.42)	(0.52)	(0.67)	(0.75)	(0.67)	(0.69)	(0.63)	(0.59)
Measure of discrimination										
$HH - HL$	2.72***	3.00***	1.74***	1.14***	-0.28	0.93	1.27	1.55**	1.87***	0.61
	(0.69)	(0.74)	(0.60)	(0.06)	(0.96)	(0.85)	(0.90)	(0.67)	(0.71)	(0.57)
$LL - LH$	-2.63***	-1.82***	-1.75***	-0.27**	-0.79	-0.93	-0.14	-2.30***	-1.54**	-1.42**
	(0.66)	(0.61)	(0.60)	(0.12)	(0.86)	(0.84)	(0.81)	(0.65)	(0.60)	(0.60)
N	1,472	1,472	1,472	11,776	1,472	1,472	1,472	11,776	11,776	11,776

Notes: E.g. HL indicates the contribution by a high status dictator to a low status receiver. $HH - HL$ is discrimination by a high status dictator. Left four columns report average contributions by dyad, and levels of discrimination. Center (right) three columns report differences in play between ADG games (between the ADGs and the RDG). Standard errors reported in parentheses. Contributions are reported as share of endowment. One, two or three asterisks indicate, respectively, 10%, 5% and 1% significance levels.

The difference we find between the RDG and the classic attribute-based dictator game (ADG-C) can be due to two types of biases: social distance and omitted attribute bias. Our experimental setup in Sierra Leone—illustrated in Table 4.1—allows us to disentangle both. The social distance bias states that differences between the ADG-C and the RDG are due to the sensitivity of behavior to knowledge about the distribution of receivers (Section 4.2). Following our design, in Sierra Leone each participant played three anonymous games where we only changed the dictator's beliefs about the distribution of relevant attributes in the population. That is, we systematically varied the level of social distance from the ADG-C (respondent is from the chiefdom) to ADG-V (respondent is from the village) to

ADG-P (respondent is a fellow participant). Differences in game play can then therefore be interpreted as a measure of social distance bias (e.g. Hoffman et al. (1996)). Focusing on Table 4.4 two results stand out as they relate to the social distance bias. First, in the first four columns we find that by decreasing the level of social distance—that is, moving from the chiefdom prime (ADG-C) to the village prime (ADG-V) to the fellow player prime (ADG-P)—decreases the average dyad contribution in the direction of the RDG. The same holds for the measures of discrimination by the high and low status dictators presented in the bottom two rows. Second, the contributions between the three games, however, do not seem to be discernible different from each other. In fact, moving from the ADG-C to the ADG-V only the contributions in the LH dyad become statistically smaller.[25] The change in average contributions when moving from the ADG-V to ADG-P are statistically insignificant for all four dyads. Furthermore, also none of the changes in the measure of discrimination is statistically different across the three anonymous games.[26]

Next, we investigate the import of the aggregation bias. Given the same population of individuals about whom the dictator knows all the attributes, the aggregation bias refers to the difference between moving from playing against the group of individuals to the average of playing against each individual separately (Section 4.2). We operationalize this by comparing donations in the RDG with those in the ADG-P. The latter column in Table 4.4 tests this difference directly. Focusing on the HH dyad, for example, the difference between the ADG-P and RDG considerable: 2.43% of the endowment. That is, average contributions in the ADG-P are on average 21% higher than those in the RDG (p-value$<$0.01). We find similar results for the other three dyads. Moving to the measurement of discrimination we find that discrimination by high status individuals in the ADG-P is *not* statistically different from that as measured in the RDG. The ADG-P, however, does overestimate levels of discrimination with a factor of 1.5. Discrimination in the RDG by low status individuals is significantly different from the ADG-P. Compared to the RDG, the ADG-P overestimates local discrim-

[25] On average, contributions in the ADG-P are 1.34% of the endowment lower than in the ADG-C (p-value$<$0.05).

[26] Direct tests are provided in the fifth to seventh column in Table 4.4.

ination with a factor of 6.5 (-0.27 of the endowment compared to -1.75%, p-value<0.05). A second result is noteworthy. Say that a researcher interested in discrimination at the local level implements an ADG-P. The researcher would incorrectly conclude that the magnitude of discrimination by high and low status individuals is similar: with high (low) status individuals contributing 1.74% (1.75%) more of their endowment to high status players. In fact, discrimination at the local level in Sierra Leone does is not characterized by such symmetry: while high status individuals contribute 1.14% of their endowment more, this is only 0.27% for low status individuals.

To conclude, we find weak evidence that the difference between the ADG-C and the RDG is driven by the social distance bias. In contrast, we find strong evidence in favor of the aggregation bias. That is, the difference between the attribute-dictator game (ADG-C) and the RDG is explained not so much by differences in the receiver population, but, given a receiver population, by the difference between playing with a group of individuals and the average of playing against these participants separately.

4.5 The Value of the RDG to Understand Discrimination at the Local Level

This paper introduced a novel tool (the RDG) to measure discrimination among populations in which individuals know each other intimately. We also showed how using traditional techniques to understand behavior at this level (the ADG) can provide an experimenter with incorrect estimates. In this final section we illustrate the full use of the RDG when it comes to understanding behavior at the local level. In contrast to the ADG, the receiver is revealed in the RDG, which allows the researcher to explore the role played by receiver characteristics and dyadic relationships. In this section, we will show that these characteristics are important to understand discriminatory behavior at the local level.

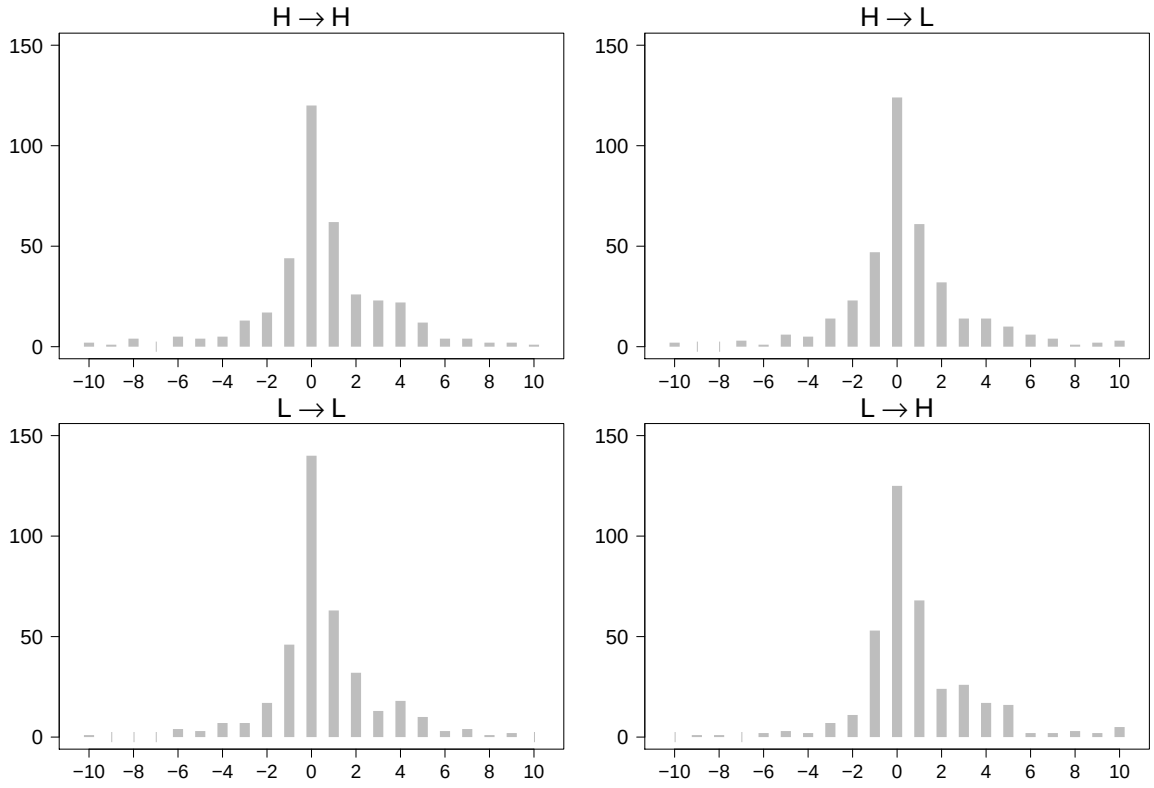
4.5.1 Another Look at Status-Based Discrimination in Sierra Leone

If obtained, the classic ADG is able to explore the role of the dictator's characteristics and whatever extra receiver information the experimenter provides to the dictator (e.g. the cleavage under study). However, at the local level individuals know much about each other, have had previous experience and are able to position each other in the social network. As a result, receiver and dyadic characteristics are likely to play an important role in shaping discriminatory behavior. A major benefit of the RDG is that we are able to investigate the importance of these factors.

Before moving there, Figure 4.3 illustrates *within dictator* variation in contributions based on whether the individual plays the ADG-P or RDG. The x-axis is measured as the average contribution in the RDG minus the contribution in the ADG-P. Three results stand out. First, we find that for each dyad type around 80% of dictators change their behavior depending on the game. Although the majority of dyads only change their contributions minimally.[27] Second, across the four dyads the number of dictators that give less/equal/more is very consistent. Between 40-50% of dictators give on average more in the ADG-P, while only around 30% of the dictators give more in the RDG. Finally, the average difference in contribution is higher for those dictators that give more in the ADG-P (ADG-P>RDG), compared to those that give less (ADG-P<RDG). This result is particularly strong for low status dictators. Low status individuals that give less in the ADG-P give only slightly less: on average 1.45% (1.33%) of the endowment when the receiver is high (low) status. In contrast, those that give more in the ADG-P give much more: on average 2.73% (2.53%) when the receiver is high (low) status. We can now add a few additional nuanced points as to why we find differential behavior between the ADG and the RDG (Section 4.4.2), even when the population of receivers is the same. First, the results are not driven by outliers. Second, the difference in average contribution is driven by the fact that more dictators give more in the ADG-P compared to the RDG. Third, the change in contribution is larger for those dictators that give more in the ADG-P, than those that give less.

[27]For presentation purposes, in Figure 4.3 differences are rounded to their nearest integer.

Figure 4.3: Comparison ADG-P and RDG



Notes: Comparison of individuals' play in ADG-P and RDG. X-axis is the average contribution in the RDG minus the contribution in the ADG-P. In the ADG-P each dictator plays once against an anonymous high and low status. In the RDG each dictator plays $n-1$ times. For each dictator, we average contributions by type of receiver. The left two panels add up to 736 dictators, and so do the two right panels.

In Section 4.4.2 we found that the level of discrimination in favor of high status individuals is over-estimated in the classic ADG. However, from Figure 4.3 we know that not all dictators discriminate in favor of high status individuals. Moreover, from Table 4.3 we know that high and low status individuals differ in many respects other than their social status. We now investigate what other characteristics may explain contribution behavior. To do so we regress sender allocations by high and low status individuals on a range of sender, receiver and dyad characteristics. Table 4.5 present the results.

Columns ADG-P 1 and RDG 1 report contributions by high and low status dictators

for respectively the ADG-P and the RDG. We replicate the result that both high and low status individuals discriminate in favor of high status receivers: the magnitudes are the same as those in Table 4.4. ADG-P 2 and RDG 2 also take into account a number of dictator characteristics (those presented in Table 4.3). We find that in the ADG both high and low status men contribute more than women. Also richer low status and illiterate high status individuals contribute more. These results, however, are not corroborated in the RDG. Most importantly, however, we find that the main results related to discriminatory behavior—both the magnitudes and the significance levels—do not change when controlling for dictator characteristics.

Table 4.5: Exploring the Importance of Receiver and Dyad Characteristics

	ADG-P 1		ADG-P 2		RDG 1		RDG 2		RDG 3		RDG 4	
	H→	L→	H→	L→	H→	L→	H→	L→	H→	L→	H→	L→
HighStatus_R	1.74*	1.75*	1.74*	1.75*	1.14***	0.27**	1.15***	0.27**	0.57**	-0.23	0.61**	-0.17
	(0.92)	(0.91)	(0.91)	(0.91)	(0.06)	(0.12)	(0.08)	(0.13)	(0.27)	(0.28)	(0.28)	(0.27)
Age_S			-0.03	0.02			-0.01	-0.05	-0.01	-0.05	-0.01	-0.06
			(0.03)	(0.05)			(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Gender_S			3.55***	2.15**			1.59	1.52	1.6	1.54	1.42	1.52
			(1.24)	(1.04)			(1.37)	(0.93)	(1.38)	(0.94)	(1.37)	(0.93)
Stranger_S			0.21	-1.06			0.23	-1.87	0.24	-1.88	-0.62	-1.65
			(0.91)	(1.33)			(0.64)	(1.30)	(0.64)	(1.30)	(0.68)	(1.28)
Farmsize_S			-0.04	-0.09			0.56*	-0.10*	0.56*	-0.11*	0.59*	-0.11*
			(0.32)	(0.10)			(0.32)	(0.06)	(0.32)	(0.06)	(0.32)	(0.06)
Chickens_S			-0.06*	0.07**			-0.06	0.06	-0.06	0.06	-0.06	0.06
			(0.03)	(0.03)			(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Literate_S			-0.75**	0.17			-0.25	-0.40*	-0.25	-0.42*	-0.23	-0.42*
			(0.37)	(0.30)			(0.44)	(0.22)	(0.44)	(0.22)	(0.44)	(0.21)
Age_R									0.03***	0.02***	0.03***	0.02***
									(0.01)	(0.01)	(0.01)	(0.01)
Gender_R									0.18	0.34	0.15	0.32
									(0.25)	(0.22)	(0.25)	(0.22)
Stranger_R									0.14	-0.05	0.14	-0.06
									(0.20)	(0.21)	(0.20)	(0.21)
Farmsize_R									-0.01	-0.02	-0.01	-0.02
									(0.02)	(0.02)	(0.03)	(0.02)
Chickens_R									0	0	0	0
									(0.01)	(0.01)	(0.01)	(0.01)
Literate_R									-0.03	-0.16**	-0.05	-0.16**
									(0.06)	(0.08)	(0.07)	(0.08)
Family											0.37	-1.37***
											(0.55)	(0.46)
Farm Share											-0.83	0.1
											(0.87)	(0.53)
Meet											-0.73	-0.01
											(0.76)	(0.61)
Borrow											-0.29	1
											(0.84)	(0.63)
Displaced											1.48*	0.41
											(0.76)	(0.47)
N	735	735	735	735	5,888	5,888	5,888	5,888	5,888	5,888	5,888	5,888

Notes: One, two or three asterisks indicate, respectively, 10%, 5% and 1% significance levels. Regressions control for village fixed effects. Standard errors, clustered by sender and receiver for the RDG regressions, are reported in parentheses.

A key benefit of the RDG is that it allows the researcher to investigate the importance of

factors beyond dictator characteristics. Column RDG 3 in Table 4.5 adds receiver characteristics. The age of the receiver seems to be a particularly important attribute for contribution, with both high and low status individuals contributing significantly more to older individuals (age is in years). Importantly, we find that not only does the inclusion of receiver characteristic drives down the substantial importance of social status of the receiver (the attribute under study), but controlling for receiver characteristics the importance of the receiver's social status is no longer statistically significant for low status dictators.

These result carry over to RDG 4 where we also add dyad characteristics. The age of the sender is still statistically and substantially significant. Moreover, and this should not be surprising, several dyadic characteristics are very important for cooperation. High status dictators contribute more to those individuals with whom they have been displaced. Low status individuals, on the other hand, contribute substantially less to those receivers that are family. The result that stands out, though, is that for low status individuals the social status of the receiver is no longer important for cooperation.

These results illustrate a major benefit of the RDG when it comes to measuring behavior at the local level. At this level we expect individuals to know their partner's attribute such as age. However, age is not, and very likely will never be, an attribute that the researcher would take into account when designing an attribute-based dictator game. That is, an experimenter interested in discrimination by social status is unlikely to tell a random set of dictators "You play with a high/low status individual of age X", and to another set of dictators "You play with a high/low status individual of age Y", etc. However, we find that discrimination in Sierra Leone is not driven by social status per se, but by age. At the local level individuals are very well informed about characteristics such as age. By not taking this attribute into account when measuring discrimination at the local level, the ADG would have falsely concluded that discrimination in Sierra Leone by low status individuals is driven by social status.

4.6 Conclusion

Discrimination matters for a wide range of development outcomes including public goods provision (e.g. Alesina et al. (1999)), conflict (e.g. Esteban et al. (2012a)) and political decisions (Chandra (2004)).

Recent empirical work that measures discrimination behaviorally have largely relied on audit studies and laboratory experiments. A key characteristic of both approaches is limited information: individuals are often strangers with limited information about each other—often little more than the cleavage under study. The intuitive interpretation of these approaches is therefore that they measure the extent of discrimination between (random) strangers. Such measures thus relate well to situations such as the housing and job market.

This study is motivated by the recognition that many of our interactions take place among individuals that are not strangers. This is particularly the case in developing societies—most farmers sell their crops to middlemen from their village, women obtain the majority of health care from local midwifes, villages rely on the local imam to educate their children, and families turn to neighbors for loans, assistance, etc. When interaction takes place at the *local level*, factors such as reciprocity, knowledge of others' attributes, and the position of individuals within a social network all affect behavior. This study conjectures that classic experimental measures to learn about discrimination may not relate well to a local setting since it fails to account for these factors.

This paper introduces a novel experimental method to measure local level discrimination. Specifically, we move beyond the classic attribute-based dictator game (ADG) and introduce what we call the revealed-receiver attribute-based dictator game (RDG). This game differs from the ADG in two ways: 1) the identity of the receiver is revealed to the dictator, and 2) subjects know each other well.

To explore difference between the ADG and the RDG, we conduct both games with 736 players in a set of rural villages in Sierra Leone. We leverage the importance of an individual's social status in a village— an important cleavage in Sierra Leone that determines access to resources and reproduction (e.g. Richards (1990)). By having both high and low status

players participate in both the ADG and the RDG we are able to test for differences in estimation of discrimination at the local level. Moreover, to explain differences between the ADG and the RDG, we allocate our players to three different versions of the ADG in which we differ the social distance between the dictator and the receiver population: the dictator contributes towards a random individual from the chiefdom (ADG-C), the village (ADG-V), or the other $n-1$ participants that also play the game (ADG-P). This experimental framework allows us to distinguish whether a difference between the ADG and the RDG is explained by differences in the receiver population (social distance bias: moving from ADG-C to ADG-P), or, given a receiver population, by the difference between playing with a group of individuals and the average of playing against these participants separately (aggregation bias: ADG-P versus RDG).

We report three main findings. First, our experimental framework illustrates how using traditional techniques to understand behavior at the local level (the ADG) can provide an experimenter with incorrect estimates. Compared to the RDG, we find that the ADG can overestimate levels of discrimination in the local context by a factor of almost ten. Second, we show that the difference between both games is mainly driven by aggregation bias, and not social distance bias: what is important for discriminatory behavior is a dictator's knowledge of the receiver, not her knowledge about the distribution of receivers. Finally, a major benefit of the RDG is that—in contrast to the ADG—we are able to investigate the importance of characteristics other than the attribute under study (in our case social status). In Sierra Leone, we find that receiver and dyad characteristics beyond social status play an important role in explaining discriminatory behavior at the local level.

This study makes two key contributions. First, we introduce a novel tool to measure discriminatory behavior at the local level: among populations that know each other well and have regular interaction. Our results support our interest in incorporating context into lab-in-the-field experiments that aim to measure behavior at the local level. The relative importance of basic individual preferences versus socially determined preferences, and the necessary conditions for individual preferences to swamp or be swamped by social consider-

ations, has received only limited attention in experimental economics. This paper tries to make one step in this direction. Second, currently the literature reports high levels of discrimination in cooperative behaviors—whether based on ethnicity, gender, residential area, etc. In so far as these studies are based upon the classic ADG to measure behavior at the local level, the findings in this paper suggest a less gloomy picture of the world.

Chapter 5

Conclusion

In this final chapter, I reflect on the main findings of this dissertation. Because the focus of the dissertation is the local level, and the data was collected in only a small area of the Congo and Sierra Leone, I focus the discussion on the external validity of my findings and how they relate to other academic studies. In addition, I provide some suggestions for future research and policy.

The level of analysis of this dissertation is the community, which is the arena of social interaction in much of the developing world. Heterogeneity at this local level, combined with a weak state and economic underdevelopment, has been found to make communities particularly receptive to conflict. We know little about cooperation between members of different groups in such communities, and we know even less about the influence of actors — such as the village chief and Non-Governmental Organizations (NGOs) — that substitute for the state at this level. This dissertation set out with five goals. Within heterogeneous communities, the dissertation aimed to understand 1) cooperative behaviors among groups, 2) the role of local institutions for cooperation, 3) the role of NGOs for cooperation, 4) the impact of external interventions on local institutions, and 5) in how far ordinary measurement tools can be applied in this setting. I will now reflect on the main findings of this dissertation.

Local institutions are resilient to external intervention and can play a positive role in heterogeneous communities

The important role for formal state institutions in heterogeneous societies is widely recognized. For example, institutions that foster stability involve countering majoritarian elements with more consensual modes of decision making: either in the way representatives are selected (Lijphart (1977)'s consociationalism), or in the relative autonomy of subnational units (Horowitz (1992)). At the local level other institutions may play a more prominent role: local networks of civic engagement with ties that cut across groups (e.g. Varshney (2001)) and within group policing (e.g. Fearon and Laitin (1996)) have been found to be important for cooperation. Yet, despite the prominent role for institutions, one institutional actor that occupies a key role at the local level in most developing countries has thus far received little attention: the village chief. Largely because the state is absent, in many developing countries — including the Congo and Sierra Leone — these chiefs manage local conflict, raise taxes, control the judicial system, and allocate property rights over land. An important argument underlying many development interventions that operate at this local, community level is that these chiefs are unaccountable despots. This view is confirmed in some academic accounts of local authority (Acemoglu et al., 2014; Murphy, 1990). A particularly popular vehicle for aid distribution in post-conflict areas that reflects this view are Community-Driven Development (CDD) programs.[1] These programs work with the villagers directly, and often sideline the village chiefs or even undertake activities to change their role in local social processes.

This dissertation (essay one) has two major results related to local institutions.

First, this dissertation questions the assumption that chiefs act as unaccountable despots. The lab-in-the-field experiments conducted in Eastern Congo suggest that local institutions play a central role in sustaining high levels of contributions between natives and migrants. In conjunction, Humphreys et al. (2015) find no evidence that local leaders act as despots in a larger sample of villages. Instead, they find high level of general participation, public information, and equity in decision making across communities. These more positive accounts of local institutions are echoed by recent empirical evidence pointing out that chiefs command the respect of rural people (Logan (2013)) and that they might be well placed as development

[1] It is estimated that in the last decade the World Bank alone spent $85 billion on these type of programs (Mansuri and Rao (2013)).

project managers (Turley et al. (2014)).

Second, local institutions are resilient to interventions by external agencies. The dissertation leverages a large CDD program, implemented in 1,250 villages in Eastern Congo between 2007 and 2011, which actively sought to change the role of traditional governance structures at the community level. I conducted a set of experimental games in 24 villages to assess the impact of the village chief on native-migrant interactions. I find no empirical evidence that the CDD program weakened the position of the village chief. This result mirrors the findings in Humphreys et al. (2015).

These results thus directly challenge both the usefulness and the basis of current international interventions. At the same time, results from the third essay — which finds that rural elites in Sierra Leone discriminate against lower status individuals — are more in line with the chief-as-despot view. Future research should assess the conditions under which local institutions are more or less good; investigate the possible differential impact based on the type of local institution; and seek to understand when development actors should sideline or rather work through local institutions.

NGOs activity can be harmful in heterogeneous communities

In many post-conflict areas, including the Congo and Sierra Leone, NGOs are a prominent actor when it comes to governance at the local level: they build infrastructure, provide aid, etc. This dissertation (essay one and two) explores the role of NGOs in communities that have recently experienced an influx of migrants. The external resources introduced by NGOs are often substantial compared to the resources a community can raise internally. One aim of these resources is to boost development, and by doing so reduce risks of conflict.[2] In areas with high levels of population movements, for example, such external resources can aid migrants directly, and have the potential to provide the village with the means to absorb incoming migrants and alleviate pressures on local systems of cooperation.

This dissertation, however, puts forth two mechanisms that explain how NGO resources

[2]Miguel et al. (2004), for example, find that economic growth is strongly negatively related to civil conflict. And De Ree and Nillesen (2009) argue that foreign aid is found to have a direct negative impact on the probability of an ongoing civil conflict to continue. See also Collier (2003) and Bates (2009).

can be harmful in heterogeneous societies.

First, NGOs often target specific social groups for the distribution of resources within a community (e.g. Alatas et al. (2012),Paler and Strauss-Kahn (2014)). Targeting can increase resentment from individuals that do not benefit from these resources. The lab-in-the-field experiment in Eastern Congo finds that in an area where NGO resources are targeted at migrants, natives respond by discriminating against migrants. Extensive qualitative evidence suggests that this result can best be explained by resentment of natives towards migrants. This negative impact of external resources relates closely to a literature on development aid and conflict (e.g. (Nunn and Qian, 2013; Anderson, 1999; De Waal, 2009; Polman, 2011)), and more specifically to a very active research agenda that tries to understand the possible negative effects of resource windfalls (e.g. (Sachs and Warner, 2001; Djankov et al., 2008)). The latter — often called the resource curse literature — has put forward several mechanisms to explain why resource windfalls lead to worse outcomes, which include rent-seeking activities generated by windfalls ((Svensson, 2000; Reinikka and Svensson, 2004)) and the reduced need for taxes and thus weak governance (Rajan and Subramanian (2007)). Increased resentment, as this dissertation suggests, adds another. Furthermore, this literature is largely based on evidence from the macro level. This dissertation joins a very limited number of studies (e.g. Paler (2013)) that investigates the resource curse at the micro level.

The dissertation adds a second mechanism to the resource curse literature: NGO resources can shape individuals' identities. More specifically, this dissertation (second essay) shows how villagers in Eastern Congo strategically choose to associate with certain identities over others in order to maximize the probability of obtaining access to NGO resources. In addition, I find empirical evidence that for migrants those identities temporarily chosen for strategic reasons can persist over time. By solidifying identities among migrants that benefit access to resources ("I am poor", "I am a migrant") at the cost of those that benefit cohesion in and integration into heterogeneous communities ("I am Congolese" and "I am a member of the village"), the long run consequences of resource distributions by NGOs can be harmful. This result is an illustrative example for a large constructivist literature in political science that

argues that identity is malleable and can be formed instrumentally in response to changing social opportunities (e.g. Laitin (1998)).

In conclusion, this dissertation suggests that NGOs need a much better understanding of local social processes before introducing resources into heterogeneous communities. Moreover, taking into consideration the positive role of local institutions for native-migrant cooperation, future research should aim to understand under what conditions it is best to work more closely with local institutions — who are likely better informed than external actors about the needs of the community's inhabitants.

Methods to measure behavior at the community level have to take into account the local context

This dissertation aims to understand social interactions in heterogeneous communities. A major concern when it comes to measuring social outcomes — such as cooperation, social cohesion, good governance, etc. — is that results may be contaminated by social desirability bias. Individuals may respond in ways that would please outsiders.[3] To minimize such bias empirical work has increasingly moved away from survey-based methods in favor of more behavioral experimental methods. A particularly popular tool are lab-in-the-field experiments (see Camerer (2003) for an overview). These games ordinarily have two characteristics: players do not know anything about their counterparts except that what is revealed by the experimenter, and players do not know each other personally.[4] These assumptions allow the researcher to isolate underlying individual preferences without contamination by social considerations. The intuitive empirical interpretation of such games is that they measure interaction between random strangers that only know the attribute under study. This dissertation (essay three) finds that while results from these studies might do well for interaction in the job or housing market in the developed world, the insights from such games do not directly travel to communities in the developing world. The reason is that at the local level, individuals are not random strangers with limited information. Villagers in rural Congo and

[3]See e.g. Cilliers et al. (2014) and Humphreys et al. (2015) for evidence of social desirability bias.
[4]See Sircar et al. (2014a) for an overview of the studies that depart from this.

rural Sierra Leone know each other well: they know each others' attributes, have had previous interactions, and are aware of the social networks in which they are embedded. In other words, social interactions in this setting are more likely to be driven by social considerations than by individual preferences. Future research should investigate the relative importance of basic individual preferences versus socially determined preferences across settings, and based upon this use the appropriate measurement tool.

Bibliography

Abdelal, R., Herrera, Y. M., Johnston, A. I., and McDermott, R. (2005). Identity as a Variable. *Working paper*.

Acemoglu, D., Reed, T., and Robinson, J. A. (2014). Chiefs: Elite Control of Civil Society and Economic Development in Sierra Leone. *Journal of Political Economy*, 122(2):319–368.

Adam, C. S. (2006). Aid and the Supply Side: Public Investment, Export Performance, and Dutch Disease in Low-Income Countries. *The World Bank Economic Review*, 20(2):261–290.

Adhikari, P. (2013). Conflict-Induced Displacement, Understanding the Causes of Flight. *American Journal of Political Science*, 57(1):82–89.

Adida, C. L., Laitin, D. D., and Valfort, M.-A. (2010). Identifying barriers to Muslim Integration in France. *Proceedings of the National Academy of Sciences*, 107(52):22384–90.

Ahmed, A. M. (2010). What Is In a Surname? The Role of Ethnicity in Economic Decision Making. *Applied Economics*, 42(21):2715–2723.

Aigner, D. J. and Cain, G. G. (1977). Statistical Theories of Discrimination in Labor Markets. *Industrial and Labor Relations Review*, 30(2):175–187.

Alatas, V., Banerjee, A., Hanna, R., Olken, B. A., and Tobias, J. (2012). Targeting the Poor: Evidence from a Field Experiment in Indonesia. *American Economic Review*, 102(4):1206–1240.

Alesina, A., Baqir, R., and Easterly, W. (1999). Public Goods and Ethnic Diversity. *Quarterly Journal of Economics*, 114(4):1243–1284.

Anderson, B. (1983). *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. Verso, London.

Anderson, M. B. (1999). *Do No Harm: How Aid Can Support Peace - or War*. Lynne Rienner, London.

Andreoni, J. (1989). Giving with Impure Altruism: Applications to Charity and Ricardian Equivalence. *Journal of Political Economy*, 97(6):1447–1458.

Andreoni, J. (1990). Impure Altruism and Donations to Public Goods: A Theory of Warm-Glow Giving. *Economic Journal*, 100(401):464–477.

Arrow, K. J. (1973). The Theory of Discrimination. In Ashenfelter, O. and Rees, A., editors, *Discrimination in the Labor Market*, pages 3–33. Princeton University Press, Princeton.

Autesserre, S. (2006). Local Violence, National Peace? Postwar "Settlement" in the Eastern D.R. Congo (2003-2006). *African Studies Review*, 49(3):1–29.

Autesserre, S. (2010). *The Trouble with the Congo. Local Violence and the Failure of International Peacebuilding*. Cambridge University Press, New York City.

Baland, J.-M., Guirkinger, C., and Mali, C. (2011). Pretending to Be Poor: Borrowing to Escape Forced Solidarity in Cameroon. *Economic Development and Cultural Change*, 60(1):1–16.

Baldassarri, D. and Grossman, G. (2013). The Effect of Group Attachment and Social Position on Prosocial Behavior. Evidence from Lab-in-the-Field Experiments. *PloS One*.

Bandiera, O., Barankay, I., and Rasul, I. (2005). Social Preferences and the Response to Incentives: Evidence from Personnel Data. *Quarterly Journal of Economics*, 120(3):917–962.

Bardhan, P. and Udry, C. (1999). *Development Microeconomics*. Oxford University Press, Oxford.

Barrett, C. B. (2006). Food Aid's Intended and Unintended Consequences. *Working paper*.

Bates, R. H. (2009). *Prosperity & Violence: The Political Economy of Development*. W. W. Norton & Company, New York City, 2nd edition.

Beaman, L. and Dillon, A. (2012). Do Household Definitions Matter in Survey Design? Results From a Randomized Survey Experiment in Mali. *Journal of Development Economics*, 98(1):124–135.

Becker, G. S. (1957). *The Economics of Discrimination*. Chicago University Press, Chicago.

Bem, D. J. (1967). Self-Perception: An Alternative Interpretation of Cognitive Dissonance Phenomena. *Psychological Review*, 74(3):183–200.

Bem, D. J. (1972). Self-Perception Theory. In Berkowitz, L., editor, *Advances in Experimental Social Psychology*, pages 1–62. Academic Press, New York City.

Bernheim, B. D. and Bagwell, K. (1988). Is Everything Neutral? *Journal of Political Economy*, 96(2):308–338.

Bertrand, M. and Mullainathan, S. (2004). Are Emily and Greg More Employable Than Lakisha and Jamal? A Field Experiment on Labor Market Discrimination. *American Economic Review*, 94(4):991–1013.

Besley, T. (1995). Savings, Credit and Insurance. In Behrman, J. R. and Srinivasan, T. N., editors, *Handbook of Development Economics*, volume III, chapter 36. Elsevier, Amsterdam.

Binzel, C. and Fehr, D. (2013). Social Distance and Trust: Experimental Evidence from a Slum in Cairo. *Journal of Development Economics*, 103:99–106.

Black, D. (1948). On the Rationale of Group Decision-Making. *Journal of Political Economy*, 56(1):23–34.

Bohnet, I. and Frey, B. S. (1999). The Sound of Silence in Prisoner's Dilemma and Dictator Games. *Journal of Economic Behavior & Organization*, 38(1):43–57.

Bohra-Mishra, P. and Massey, D. S. (2011). Individual Decisions to Migrate During Civil Conflict. *Demography*, 48(2):401–24.

Bolton, G. E. and Ockenfels, A. (2000). ERC: A Theory of Equity, Reciprocity, and Competition. *American Economic Review*, 90(1):166–193.

Boone, P. (1996). Politics and the Effectiveness of Foreign Aid. *European Economic Review*, 40(2):289–329.

Borjas, G. J. (1994). The Economics of Immigration. *Journal of Economic Literature*, 32(4):1667–1717.

Bowles, S. and Gintis, H. (1998). The Moral Economy of Communities: Structured Populations and the Evolution of Pro-Social Norms. *Evolution and Human Behavior*, 19(1):3–25.

Bowles, S. and Gintis, H. (2011). *A Cooperative Species: Human Reciprocity and Its Evolution*. Princeton University Press, Princeton.

Bräutigam, D. A. and Knack, S. (2004). Foreign Aid, Institutions, and Governance in Sub-Saharan Africa. *Economic Development and Cultural Change*, 52(2):255–285.

Brubaker, R. and Cooper, F. (2000). Beyond 'Identity'. *Theory and Society*, 29:1–47.

Buhaug, H. (2008). Contagion or Confusion? Why Conflicts Cluster in Space. *International Studies Quarterly*, 52(2):215–233.

Burnham, T. C. (2003). Engineering Altruism: A Theoretical and Experimental Investigation of Anonymity and Gift Giving. *Journal of Economic Behavior & Organization*, 50(1):133–144.

Camerer, C. F. (2003). *Behavioral Game Theory: Experiments on Strategic Interaction*. Princeton University Press, Princeton.

Cameron, A. C., Gelbach, J. B., and Miller, D. L. (2011). Robust Inference With Multiway Clustering. *Journal of Business & Economic Statistics*, 29(2):238–249.

Carpenter, J. P. (2007). Punishing free-riders: How group size affects mutual monitoring and the provision of public goods. *Games and Economic Behavior*, 60(1):31–51.

Casey, K., Glennerster, R., and Miguel, E. (2013). Reshaping Institutions: Evidence on Aid Impacts using a Preanalysis Plan. *Quarterly Journal of Economics*, 127(4):1755–1812.

Chandra, K. (2004). *Why Ethnic Parties Succeed*. Cambridge University Press, New York City.

Chandra, K. and Laitin, D. (2002). A Framework for Thinking About Identity Change. *Working paper*.

Charness, G. and Gneezy, U. (2008). What's in a Name? Anonymity and Social Distance in Dictator and Ultimatum Games. *Journal of Economic Behavior & Organization*, 68(1):29–35.

Chaudhuri, A. (2010). Sustaining Cooperation in Laboratory Public Goods Experiments: A Selective Survey of the Literature. *Experimental Economics*, 14(1):47–83.

Cilliers, J., Dube, O., and Siddiqi, B. (2014). White Man's Burden? A Field Experiment on Generosity and Foreigner Presence. *Working paper*.

Claessens, K., Mudinga, E., and Ansoms, A. (2013). Land Grabbing by Local Elites in the Territory of Kalehe, South Kivu, Eastern DRC. *Working paper*.

Coate, S. and Ravallion, M. (1993). Reciprocity Without Commitment: Characterization and Performance of Informal Insurance Arrangements. *Journal of Development Economics*, 40(1):1–24.

Coghlan, B., Brennan, R. J., Ngoy, P., Dofara, D., Otto, B., Clements, M., and Stewart, T. (2006). Mortality in the Democratic Republic of Congo: A Nationwide Survey. *Lancet*, 367:44–51.

Collier, P. (2003). *Breaking the Conflict Trap: Civil War and Development Policy*. Oxford University Press, New York City.

Collier, P. and Hoeffler, A. (1998). On Economic Causes of Civil War. *Oxford Economic Papers*, 50:563–573.

Corstange, D. (2014). Foreign Sponsorship Effects in Developing-World Surveys: Evidence from a Field Experiment in Lebanon. *Public Opinion Quarterly*, (forthcoming).

Croson, R. T. (1996). Information in Ultimatum Games: An Experimental Study. *Journal of Economic Behavior & Organization*, 30(2):197–212.

Das Gupta, M. (1987). Informal Security Mechanisms and Population Retention in Rural India. *Economic Development and Cultural Change*, 36(1):101–120.

Davenport, C. A., Moore, W. H., and Poe, S. C. (2003). Sometimes You Just Have to Leave: Domestic Threats and Forced Migration: 1964-1989. *International Interactions*, 29(1):27–55.

De Ree, J. and Nillesen, E. (2009). Aiding Violence or Peace? The Impact of Foreign Aid on the Risk of Civil Conflict in Sub-Saharan Africa. *Journal of Development Economics*, 88(2):301–313.

De Waal, A. (2004). Rethinking Aid. *New Economy*, 11(3):158–163.

De Waal, A. (2009). *Famine Crimes: Politics & the Disaster Relief Industry in Africa*. Indiana University Press, Bloomington.

Djankov, S., Montalvo, J. G., and Reynal-Querol, M. (2008). The Curse of Aid. *Journal of Economic Growth*, 13(3):169–194.

Duflo, E., Hanna, R., and Ryan, S. P. (2012). Incentives Work: Getting Teachers to Come to School. *American Economic Review*, 102(4):1241–1278.

Duflo, E., Kremer, M., and Robinson, J. (2011). Nudging Farmers to Use Fertilizer: Theory and Experimental Evidence from Kenya. *American Economic Review*, 101(6):2350–2390.

Dupas, P. and Robinson, J. (2013). Why Don't the Poor Save More? Evidence from Health Savings Experiments. *American Economic Review*, 103(4):1138–1171.

Easterly, W. (2007). *The White Man's Burden: Why the West's Efforts to Aid the Rest Have Done So Much Ill And So Little Good*. Oxford University Press, New York City.

Elster, J. (1995). Forces and Mechanisms in the Constitution-making Process. *Duke Law Journal*, 45(364):364–396.

Engel, S. and María, A. (2007). Displacement Due to Violence in Colombia: A Household-Level Analysis. *Economic Development and Cultural Change*, 55(2):335–365.

Esteban, J., Mayoral, L., and Ray, D. (2012a). Ethnicity and Conflict: An Empirical Study. *American Economic Review*, 102(4):1310–1342.

Esteban, J., Mayoral, L., and Ray, D. (2012b). Ethnicity and Conflict: Theory and Facts. *Science*, 336(6083):858–65.

Etang, A., Fielding, D., and Knowles, S. (2011). Does Trust Extend Beyond the Village? Experimental Trust and Social Distance in Cameroon. *Experimental Economics*, 14:15–35.

Fafchamps, M. (1992). Solidarity Networks in Preindustrial Societies: Rational Peasants with a Moral Economy. *Economic Development and Cultural Change*, 41(1):147–174.

Fafchamps, M. and Lund, S. (2003). Risk-Sharing Networks in Rural Philippines. *Journal of Development Economics*, 71(2):261–287.

Fanthorpe, R. (2001). Neither Citizen nor Subject? 'Lumpen' Agency and the Legacy of Native Administration in Sierra Leone. *African Affairs*, 100(400):363–386.

Fanthorpe, R. (2005). On the Limits of Liberal Peace: Chiefs and Democratic Decentralization in Post-War Sierra Leone. *African Affairs*, 105(418):27–49.

Fanthorpe, R. and Maconachie, R. (2010). Beyond the 'Crisis of Youth'? Mining, Farming, and Civil Society in Post-War Sierra Leone. *African Affairs*, 109(435):251–272.

Fazio, R. H., Zanna, M. P., and Cooper, J. (1977). Dissonance and Self-Perception: An Integrative View of Each Theory's Proper Domain of Application. *Journal of Experimental Social Psychology*, 13(5):464–479.

Fearon, J. D. (1999). What is Identity (As We Now Use The Word)? *Working paper*.

Fearon, J. D., Humphreys, M., and Weinstein, J. M. (2009). Can Development Aid Contribute to Social Cohesion after Civil War? Evidence from a Field Experiment in Post-Conflict Liberia. *American Economic Review: Papers & Proceedings*, 99(2):287–291.

Fearon, J. D. and Laitin, D. D. (1996). Explaining Interethnic Cooperation. *American Political Science Review*, 90(4):715–735.

Fearon, J. D. and Laitin, D. D. (2000). Violence and the Social Construction of Ethnic Identity. *International Organization*, 54(4):845–877.

Fehr, E. and Gachter, S. (2000). Cooperation and Punishment in Public goods experiments. *American Economic Review*, 90(4):980–994.

Fehr, E. and Schmidt, K. M. (1999). A Theory of Fairness, Competition, and Cooperation. *Quarterly Journal of Economics*, 114(3):817–868.

Fershtman, C. and Gneezy, U. (2001). Discrimination in a Segmented Society: An Experimental Approach. *Quarterly Journal of Economics*, 116(1):351–377.

Fisher, R. A. (1935). *The Design of Experiments*. Oliver and Boyd, London.

Fowler, J. H. and Kam, C. D. (2007). Beyond the Self: Social Identity, Altruism, and Political Participation. *The Journal of Politics*, 69(3):813–827.

Frey, B. S. and Oberholzer-Gee, F. (1997). The Cost of Price Incentives: An Empirical Analysis of Motivation Crowding-Out. *American Economic Review*, 87(4):746–755.

Geertz, C. (1973). *The Interpretation of Cultures*. Basic Books, New York City.

Gellner, E. (1983). *Nations and Nationalism*. Cornell University Press, Ithaca.

Gerber, A. S. and Malhotra, N. (2008). Do Statistical Reporting Standards Affect What Is Published? Publication Bias in Two Leading Political Science Journals. *Quarterly Journal of Political Science*, 3:313–326.

Glennerster, R., Miguel, E., and Rothenberg, A. (2013). Collective Action in Diverse Sierra Leone Communities. *Economic Journal*, 123(568):285–316.

Green, D., Humphreys, M., and Smith, J. (2013). Read it, Understand it, Believe it, Use it: Principles and Proposals for a More Credible Research Publication. *Working paper*.

Greif, A. (2006). History Lessons: The Birth of Impersonal Exchange: The Community Responsibility System and Impartial Justice. *Journal of Economic Perspectives*, 20(2):221–236.

Habyarimana, J., Humphreys, M., Posner, D. N., and Weinstein, J. M. (2007). Why Does Ethnic Diversity Undermine Public Goods Provision? *American Political Science Review*, 101(4):709–725.

Haley, K. J. and Fessler, D. M. (2005). Nobody's Watching? Subtle Cues Affect Generosity in an Anonymous Economic Game. *Evolution and Human Behavior*, 26(3):245–256.

Hamilton, D. L. and Sherman, S. J. (1996). Perceiving Persons and Groups. *Psychological Review*, 103(2):336–55.

Hoffman, E., McCabe, K., and Smith, V. L. (1996). Social Distance and Other-Regarding Behavior in Dictator Games. *American Economic Review*, 86(3):653–660.

Holm, H. J. (2000). Gender-Based Focal Points. *Games and Economic Behavior*, 32(2):292–314.

Horowitz, D. L. (1992). *A Democratic South Africa? Constitutional Engineering in a Divided Society*. University of California Press, Berkeley.

Howard, J. A. (2000). Social Psychology of Identities. *Annual Review of Sociology*, 26:367–393.

Humphreys, M. (2008). Community-Driven Reconstruction in the Democratic Republic of Congo: Baseline Report. Technical report.

Humphreys, M., Masters, W. A., and Sandbu, M. E. (2006). The Role of Leaders in Democratic Deliberations: Results from a Field Experiment in Sao Tome and Principe. *World Politics*, 58:583–622.

Humphreys, M., Sanchez de la Sierra, R., and Van der Windt, P. (2013). Fishing, Commitment, and Communication. *Political Analysis*, 21(1):1–20.

Humphreys, M., Sanchez de la Sierra, R., and Van der Windt, P. (2015). Social Engineering in the Tropics: A Grassroots Democratization Experiment in the Congo. *Working paper*.

Humphreys, M. and Weinstein, J. M. (2008). Who Fights? The Determinants of Participation in Civil War. *American Journal of Political Science*, 52(2):436–455.

Ibáñez, A. M. and Vélez, C. E. (2008). Civil Conflict and Forced Migration: The Micro Determinants and Welfare Losses of Displacement in Colombia. *World Development*, 36(4):659–676.

Imai, K., King, G., and Stuart, E. A. (2008). Misunderstandings Between Experimentalists and Observationalists About Causal Inference. *Journal of the Royal Statistical Society: Series A*, 171(2):481–502.

IRC (2007). *Mortality in the Democratic Republic of Congo: An Ongoing Crisis*.

IRC (2012). Tuungane Phase I (2007-2010): IRCs achievements in Community Driven Reconstruction in DR Congo. Technical report.

Jenni, K. E. and Lowenstein, G. (1997). Explaining the "Identifiable Victim Effect". *Journal of Risk and Uncertainty*, 14:235–257.

Kabwit, G. C. (1979). Zaire: the Roots of the Continuing Crisis. *The Journal of Modern African Studies*, 17(3):381–407.

Kahneman, D., Knetsch, J. L., and Thaler, R. (1986). Fairness as a Constraint on Profit Seeking: Entitlements in the Market. *American Economic Review*, 76(4):728–741.

Kogut, T. and Ritov, I. (2005). The "Identified Victim" Effect: An Identified Group, or Just a Single Individual? *Journal of Behavioral Decision Making*, 18(3):157–167.

Laird, J. (2007). *Feelings: The Perception of Self*. Oxford University Press, New York City.

Laitin, D. D. (1986). *Hegemony and Culture: Politics and Religious Change Among the Yoruba*. University of Chicago Press, Chicago.

Laitin, D. D. (1998). *Identity in Formation: The Russian-Speaking Populations in the Near Abroad*. Cornell University Press, Ithaca.

Leider, S., Mobius, M. M., and Do, Q.-A. (2009). Directed Altruism and Enforced Reciprocity in Social Networks. *Quarterly Journal of Economics*, 124(4):1815–1851.

Levitt, S. D. and List, J. A. (2007). What Do Laboratory Experiments Measuring Social Preferences Reveal About the Real World? *The Journal of Economic Perspectives*, 21(2):153–174.

Ligon, E. and Schechter, L. (2012). Motives for Sharing in Social Networks. *Journal of Development Economics*, 99(1):13–26.

Ligon, E., Thomas, J. P., and Worrall, T. (2002). Informal Insurance Arrangements with Limited Commitment: Theory and Evidence from Village Economies. *Review of Economic Studies*, 69(1):209–244.

Lijphart, A. (1977). *Democracy in Plural Societies*. Yale University Press, New Haven.

List, J. A. (2004). The Nature and Extent of Discrimination in the Marketplace: Evidence from the Field. *Quarterly Journal of Economics*, 119(1):49–89.

List, J. A. (2006). The Behavioralist Meets the Market: Measuring Social Preferences and Reputation in Actual Transactions. *Journal of Political Economy*, 114(1):1–37.

List, J. A. (2007). On the Interpretation of Giving in Dictator Games. *Journal of Political Economy*, 115(3):482–493.

Logan, C. (2013). The Roots of Resilience: Exploring Popular Support for African Traditional Authorities. *African Affairs*, 112(448):353–376.

Lucas, R. E. B. (1997). Internal Migration in Developing Countries. In Rosenzweig, M. R. and Stark, O., editors, *Handbook of Population and Family Economics*, chapter 13, pages 721–798. Elsevier, Amsterdam.

Mackie, G. (1996). Ending Footbinding and Infibulation: A Convention Account. *American Sociological Review*, 61(6):999–1017.

Mamdani, M. (1996). *Citizen and Subject: Contemporary Africa and the Legacy of Late Colonialism*. Princeton University Press, Princeton.

Mansuri, G. and Rao, V. (2013). *Localizing Development: Does Participation Work?* World Bank Policy Report.

Melander, E. and Öberg, M. (2007). The Threat of Violence and Forced Migration: Geographical Scope Trumps Intensity of Fighting. *Civil Wars*, 9(2):156–173.

Miguel, E. and Kremer, M. (2004). Worms: Identifying Impacts on Education and Health in the Presence of Treatment Externalities. *Econometrica*, 72(1):159–217.

Miguel, E., Satyanath, S., and Sergenti, E. (2004). Economic Shocks and Civil Conflict: An Instrumental Variables Approach. *Journal of Political Economy*, 112(4):725–753.

Mokuwa, E., Voors, M., Bulte, E., and Richards, P. (2011). Peasant Grievance and Insurgency in Sierra Leone: Judicial Serfdom as a Driver of Conflict. *African Affairs*, 110(440):339–366.

Moore, W. H. and Shellman, S. M. (2004). Fear of Persecution: Forced Migration, 1952-1995. *Journal of Conflict Resolution*, 48(5):723–745.

Morten, M. (2012). Temporary Migration and Endogenous Risk Sharing in Village India. *Working paper*.

Murphy, W. P. (1990). Creating the Appearance of Consensus in Mende Political Discourse. *American Anthropologist*, 92(1):24–41.

Mutz, D. and Pemantle, R. (2011). The Perils of Randomization Checks in the Analysis of Experiments. *Working paper*.

Neal, D. A. and Johnson, W. R. (1996). The Role of Premarket Factors in Black-White Wage Differences. *Journal of Political Economy*, 104(5):869–895.

Nillesen, E. M. and Bulte, E. H. (2014). Natural Resources and Violent Conflict: An Overview of the Literature. *Annual Review of Resource Economics*, (Forthcoming).

Nunn, N. and Qian, N. (2013). Aiding Conflict: The Impact of U.S. Food Aid on Civil War. *NBER Working paper*, 17794.

Nunn, N. and Qian, N. (2014). US Food Aid and Civil Conflict. *American Economic Review*, 104(6):1630–1666.

Olken, B. A. (2007). Monitoring Corruption: Evidence from a Field Experiment in Indonesia. *Journal of Political Economy*, 115(2):200–249.

Paler, L. (2013). Keeping the Public Purse: An Experiment in Windfalls, Taxes, and the Incentives to Restrain Government. *American Political Science Review*, (Forthcoming).

Paler, L. and Strauss-Kahn, C. (2014). The Adverse Effects of Targeting Aid within Communities. *Working paper*.

Petersen, M. A. (2008). Estimating Standard Errors in Finance Panel Data Sets: Comparing Approaches. *Review of Financial Studies*, 22(1):435–480.

Peterson, P. E. and Rom, M. (1989). American Federalism, Welfare Policy, and Residential Choices. *American Political Science Review*, 83(3):711–728.

Phelps, E. S. (1972). The Statistical Theory of Racism and Sexism. *American Economic Review*, 62(4):659–661.

Platteau, J.-P. (1997). Mutual Insurance as an Elusive Concept in Traditional Rural Communities. *Journal of Development Studies*, 33(6):764–796.

Polman, L. (2011). *The Crisis Caravan: What's Wrong with Humanitarian Aid?* Picador, New York City.

Posner, D. N. (2004). The Political Salience of Cultural Difference: Why Chewas and Tumbukas Are Allies in Zambia and Adversaries in Malawi. *American Political Science Review*, 98(04):529–545.

Prunier, G. (2009). *Africa's World War: Congo, the Rwandan Genocide, and the Making of a Continental Catastrophe*. Oxford University Press, Oxford.

Rajan, R. G. and Subramanian, A. (2007). Does Aid Affect Governance? *American Economic Review*, 97(2):322–327.

Rajan, R. G. and Subramanian, A. (2008). Aid and Growth: What Does the Cross-Country Evidence Really Show? *Review of Economics and Statistics*, 90(4):643–665.

Ravallion, M. and Chaudhuri, S. (1997). Risk and Insurance in Village India: Comment. *Econometrica*, 65(1):171–184.

Ray, D. (1998). *Development Economics*. Princeton University Press, Princeton.

Reinikka, R. and Svensson, J. (2004). Local Capture: Evidence from a Central Government Transfer Program in Uganda. *Quarterly Journal of Economics*, 119(2):679–705.

Riach, P. A. and Rich, J. (2002). Field Experiments of Discrimination in the Market Place. *Economic Journal*, 112(483):480–518.

Richards, P. (1990). Local Strategies for Coping with Hunger: Central Sierra Leone and Northern Nigeria Compared. *African Affairs*, 89(355):265–275.

Richards, P. (1996). *Fighting for the Rainforest*. Heineman, Oxford.

Richards, P. (2005). To Fight or to Farm? Agrarian Dimensions of the Mano River Conflicts (Liberia and Sierra Leone). *African Affairs*, 104(417):571–590.

Risse, T. (2010). *Governance Without a State? Policies and Politics in Areas of Limited Statehood.* Columbia University Press, New York City.

Roberts, R. D. (1984). A Positive Model of Private Charity and Public Transfers. *Journal of Political Economy*, 92(1):136–148.

Roberts, R. D. (1987). Financing Public Goods. *Journal of Political Economy*, 95(2):420–437.

Rosenzweig, M. R. (1988). Risk, Implicit Contracts and the Family in Rural Areas of Low-Income Countries. *The Economic Journal*, 98(393):1148–1170.

Rosenzweig, M. R. and Stark, O. (1989). Consumption Smoothing, Migration, and Marriage: Evidence from Rural India. *Journal of Political Economy*, 97(4):905–926.

Rosenzweig, M. R. and Wolpin, K. J. (1988). Migration Selectivity and the Effects of Public Programs. *Journal of Public Economics*, 37(2):265–289.

Ross, M. L. (2004). What Do We Know about Natural Resources and Civil War? *Journal of Peace Research*, 41(3):337–356.

Ruiz, I. and Vargas-Silva, C. (2013). The Economics of Forced Migration. *Journal of Development Studies*, 49(6):772–784.

Sachs, J. D. and Warner, A. M. (2001). The Curse of Natural Resources. *European Economic Review*, 45(4-6):827–838.

Salehyan, I. and Gleditsch, K. S. (2006). Refugees and the Spread of Civil War. *International Organization*, 60(02):335–366.

Sawyer, E. (2008). Remove or Reform? A Case for (Restructuring) Chiefdom Governance in Post-Conflict Sierra Leone. *African Affairs*, 107(428):387–403.

Schultz, T. P. (1971). Rural-Urban Migration in Colombia. *Review of Economics and Statistics*, 53(2):157–163.

Scott, J. C. (1977). *The Moral Economy of the Peasant: Rebellion and Subsistence in Southeast Asia*. Yale University Press, New Haven.

Simmons, J. P., Nelson, L. D., and Simonsohn, U. (2011). False-Positive Psychology: Undisclosed Flexibility in Data Collection and Analysis Allows Presenting Anything as Significant. *Psychological Science*.

Sircar, N., Turley, T., Voors, M. J., and Van der Windt, P. (2014a). Behavior at the Local Level. *Working paper*.

Sircar, N., Turley, T., Voors, M. J., and Van der Windt, P. (2014b). Revealed Identity in Experimental Games: Evidence from a Novel Lab-in-the-Field Experiment in Sierra Leone. *Working paper*.

Sircar, N. and Van der Windt, P. (2015). Pro-social Behavior in the Context of Rural Migration: Evidence from a Lab-in-the-Field Experiment in the Congo. *Working paper*.

Sjaastad, L. A. (1962). The Costs and Returns of Human Migration. *Journal of Political Economy*, 70(5):80–93.

Small, D. A. (2003). Helping a Victim or Helping the Victim: Altruism and Identifiability. *Journal of Risk and Uncertainty*, 26:5–16.

Svensson, J. (2000). Foreign Aid and Rent-Seeking. *Journal of International Economics*, 51(2):437–461.

Thompson, S. B. (2011). Simple Formulas for Standard Errors that Cluster by Both Firm and Time. *Journal of Financial Economics*, 99(1):1–10.

Thomson, E. P. (1971). The Moral Economy of the English Crowd in the Eighteenth Century. *Past & Present*, 50:76–136.

Tiebout, C. M. (1956). A Pure Theory of Local Expenditure. *Journal of Political Economy*, 64(5):416–424.

Todaro, M. P. (1969). A Model of Labor Migration and Urban Unemployment in Less Developed Countries. *American Economic Review*, 99(1):138–148.

Townsend, R. M. (1994). Risk and Insurance in Village India. *Econometrica*, 62(3):539–591.

Turley, T., Voors, M., Bulte, E., Kontoleon, A., and List, J. A. (2014). Chief for a Day! Chiefs, Participatory Development and Elite Capture in Sierra Leone. *Working paper*.

Udry, C. (1994). Risk and Insurance in a Rural Credit Market: An Empirical Investigation in Northern Nigeria. *Review of Economic Studies*, 61(3):495–526.

UNDP (2009). Human Development Report: Overcoming Barriers: Human Mobility and Development. Technical report.

Van Acker, F. (2005). Where Did All the Land Go? Enclosure and Social Struggle in Kivu (D.R.Congo). *Review of African Political Economy*, 32(103):79–98.

Van der Ploeg, F. (2011). Natural Resources: Curse or Blessing? *Journal of Economic Literature*, 49(2):366–420.

Van der Windt, P. and Humphreys, M. (2015). Crowdseeding in Eastern Congo: Using Cell Phones to Collect Conflict Events Data in Real Time. *Journal of Conflict Resolution*, (Forthcoming).

Varshney, A. (2001). Ethnic Conflict and Civil Society: India and Beyond. *World Politics*, 53(3):362–398.

Vlassenroot, K. and Huggins, C. (2005). Land, Migration and Conflict in Eastern DRC. In Huggins, C. and Clover, J., editors, *From the Ground Up: Land Rights, Conflict and Peace in Sub-Saharan Africa*, pages 115–194. ISS, Pretoria.

Voldon, C. (2002). The Politics of Competitive Federalism: A Race to the Bottom in Welfare Benefits? *American Journal of Political Science*, 46(2):352–363.

Whitfield, L. (2009). *The Politics of Aid: African Strategies for Dealing With Donors*. Oxford University Press, New York City.

Whitt, S. and Wilson, R. K. (2007). The Dictator Game, Fairness and Ethnicity in Postwar Bosnia. *American Journal of Political Science*, 51(3):655–668.

Young, C. and Turner, T. (1985). *The Rise and Decline of the Zairian State*. University of Wisconsin Press, Madison.

Zanna, M. P. and Cooper, J. (1974). Dissonance and the Pill: An Attribution Approach to Studying the Arousal Properties of Dissonance. *Journal of Personality and Social Psychology*, 29(5):703–709.

Appendix A

Appendix: Instruments for Data Collection

The next pages present the instruments used to collect data in the Congo and Sierra Leone. The pre-analysis plans can be found at `www.egap.org`.

A.1 The Congo: Protocol for Data Collection

PROTOCOL ET LIVRE DE CODE

Avant de partir au village

Etape 1	Chaque fois vous allez travailler dans trois villages. Savoir les trois villages avant votre départ. Une liste avec des villages et leur ordre d'exécution sera fournie par Peter.
Etape 2	Amener quatre copies de AL (ou DL) pour ce village. Ces formulaires ont été créés pour l'évaluation de TUUNGANE et la liste présente les ménages dans un village. Trois copies sont pour les membres d'équipe pour utilisation pendant le travail. L'autre c'est pour créer la liste « ensemble ».
Etape 3	Amener 3*18 fois une copie de **« ENQUETE JOUER »** – une pour chaque participant (9 migrants et 9 autochtones) et pour trois villages.
Etape 4	Amener trois « **FICHE CHEF D'EQUIPE** », donc one pour chaque village.
Etape 5	Amener les fiches **« ENQUETE CARTHOGRAPHIE »** : 250 pour chaque village, donc 750 en total.
Etape 6	Equipement. Pour chaque membre de l'équipe : Appareil photo, GPS, chargeur solaire, et les pilles réserves. Le chef d'équipe a aussi : Les deux Polariod Pogo imprimantes, la batterie réserve pour l'imprimant, les papiers nécessaires pour imprimer les photos, et les câbles pour charger les imprimantes.
Etape 7	Envoyez une SMS a Peter indique que vous allez sur terrain dans les villages X, Y et Z.

Jours des cartographies (2-4 jours)

Etape 1	Rencontre avec le chef : expliquer le projet, obtenir l'approbation, trouver trois personnes (aides de chef) qui vont vous aider a faire la cartographie, expliquer au chef que vous allez rester dans le village quelques jours, obtenir un endroit pour dormir, et demandez un lieu où les jeux peuvent avoir lieu.
Etape 2	Faites **« FICHE CHEF D'EQUIPE »**. C'est important pour la cartographie parce que vous devez savoir quels projets a eu lieu dans ce village !
Etape 3	Partagez les axes avec les aides de chef en trois. N'oubliez pas : Chaque aide va recevoir 2,000 CFR à la fin du jour.
Etape 4	Commencez la cartographie. Voyez le **« GUIDE DE CARTHOGRAPHIE »** pour plus d'information. La cartographie dans quelques villages besoin 2 jours, dans les autres 3 ou quatre.
Etape 5	Chaque jour a le fin de journée être ensemble et vérifier les données collectionné par les autres membres d'équipe. Cette a dire, chaque membre va vérifier les données d'un autre membre d'équipe.

Jour de AL/DL et enquête joueur (1 jour)

Etape 1	S'il n'y a pas de liste AL/DL :
	Pendant la cartographie vous devez rempli r le nom de chef du ménage sur le fiche. Maintenant créer « LA LISTE » avec 2 colonnes : les chiffre (1, 2, 3, etc.) et les noms des chefs du ménage. Maintenant nous avons une fiche comme la liste AL ou DL. La Guide de Capture c'est pas utile pour ce village parce que ce village n' a pas crée la liste AL ou DL (ne fait pas parite de projet RAPID).
	S'il y a de liste AL :
	GUIDE DE CAPTURE Il y a 3 possibilités pour faire capture avec les listes: 1. ***[capture possibilité 1]*** Pas écrire les noms des ménages qui ne sont pas des familles/ amis/ etc. de chef ou nyumba kumi sur la liste AL ; 2. ***[capture possibilité 2]*** Ecrire les noms des ménages qui sont famille/ amis/ etc. de chef ou nyumba kumi plus d'une fois sur la liste AL ; 3. ***[capture possibilité 3]*** Ecrire les noms des ménages sur la liste AL qui actuellement n'existe pas dans le village. **NOTRE STRATEGIE <u>PENDANT</u> LA CARTOGRAPHIE** 1. Nous allons faire la cartographie et chaque enquêteur aura la liste AL. Pendant la cartographie l'enquêteur remplit le chiffre AL sur la fiche. 2. Si un ménage se trouve plus d'une fois sur le liste AL, remplissez tous les chiffres (de liste AL) sur la fiche de cartographie.

	3. Aussi faire une « X » a cote de chiffre sur la liste AL pour indiquer que vous avez trouve le ménage. 4. Si le ménage ne se retrouve pas sur la liste AL, ajoutez ce ménage (avec nom complet !) à la fin de liste AL (avec votre lettre avant le chiffre). Aussi remplissez le chiffre AL sur la fiche avec votre lettre avant ce chiffre. Par exemple, pour Desire « D203 ». La raison pour ajouter votre lettre c'est pour séparer les ménages originaux de liste AL, est les ménages que vous avez ajouté. **NOTRE STRATEGIE <u>APRES</u> LA CARTOGRAPHIE** 5. Avec le chef essayer de trouver tous les nouveaux ménages (que vous avez ajoutés) sur la liste AL originale. C'est possible qu'un ménage a sur le liste AL originale un nom de ménage une petit peu différent. Si il y a des ménages que vous avez ajoute mais qui sont actuellement sur la liste AL vous devez : trouvez le fiche pour ce ménage et effacer votre code que vous avez écrit (le chiffre qui commence avec votre premier lettre) et remplissez le code original sur la liste AL. Attention : Pour les ménages que vous avez trouvé mais qui ne se trouve pas sur le liste AL il y a de ***[capture possibilité 1]***. 6. Maintenant s'il y a toujours les ménagés sur la liste AL que vous n'avez pas trouvé (très probable), il y a quatre options : a. Le ménage existe sur la liste AL mais vous n'avez pas encore visite ce ménage ; b. Le ménage a quitté ce village âpres la création de liste AL et avant votre arrive ; c. Un ménage est sur la liste originale plus d'une fois mais avec quelques noms différents ***[capture possibilité 2]*** ; d. Il y a des ménages qui actuellement n'existent pas dans le village mais qui se trouve sur la liste AL ***[capture possibilité 3]***. 7. Donc maintenant faites attention ! Si le chef a l'idée qui vous êtes en train de trouver sa capture il va dire que tout le monde a quitté son village. Dans les mots différents : il ne va pas vous donner la vérité parce qu'il ne voudrait pas que nous trouvions sa capture. a. Si le ménage existe dans le ménage mais vous n'avez pas encore visite ce ménage, visiter le ménage. b. Si le ménage a quitté le village : remplissez une lettre « C » a cote de ce ménage sur la liste AL et au verso écrire le chiffre de ce ménage et que ce ménage a quitté le village. Et aussi la raison, la date, l'endroit, et la langue maternelle de ce ménage. c. Si le ménage a été sur la liste AL plus d'une fois : remplissez une lettre « C » a cote des ces noms sur la liste AL et au verso écrire les chiffres de cette ménage. Par exemple : « 21, 34 et 102 sont le même ménage ». IMPORTANT : Trouver la fiche de ce ménage et remplissez toute ses chiffres sur la fiche de cartographie. Donc pour l'exemple : « 21, 34, 102 ». d. Pour les ménages que se trouvent sur le liste AL mais qui actuellement n'existent pas dans le village, remplissez une lettre « C » à cote de ménage sur la liste AL et au verso écrire le chiffre de ce ménage et « le ménage existe pas dans ce village » et aussi essayez de trouver la cause pourquoi le ménage n'existé plus dans le village et l'endroit ou se trouve ménage. <u>Finalement</u>, posez la question au chef si la liste AL a été créée avec une liste de village, ou sans une liste de village. Pourquoi, c'est important ? Par exemple, si notre équipe à copier seulement la liste de village d'un chef et cette liste est ancienne il manque beaucoup de nouveaux ménages. Donc, pas de capture mais simplement une ancienne liste. Ecrivez la réponse sur la fiche « **FICHE CHEF D'EQUIPE** ». <u>Pour votre information</u> : Peut être ce n'est pas nécessairement capture que nous allons trouver. Peut-être le chef et nyumba kumi a une définition différente d' un ménage comme nous (par exemple un ménage polygame avec 2 femme c'est peut être deux ménages pour lui). Si nous trouverons qu'il y avait capture nous devons savoir exactement qui a fait la capture. Donc, nous devons savoir qui a créé la liste AL. C'est pourquoi, il y a sur la « **FICHE CHEF D'EQUIPE** » un endroit ou nous allons remplir qui a été présent pendant la création de la liste AL. Nous allons remplir cette information ensemble avec les personnes qui a cette information. Nous obtenons aussi l'info sur ces gens position dans le village et position dans le comite RAPID (si le village est un village RAPID). Nous obtenons aussi le chiffre AL de ces gens donc nous pouvons trouver leur information de cartographie avec l'information de leur connexion avec le chef du village, groupe ethnique, etc. (tous probable important pour capture).
Etape 2	Maintenant sélectionnez 18 personnes pour les jeux, et leur remplacements. (Voir ci-dessous **SELECTIONEZ 18**

	MENAGES pour plus de détails). Ecrivez les noms et les chiffre AL/DL/LISTE sur **« FICHE DE JOUR »**. n'Oubliez pas : joueur 1-9 sont des déplaces et joueur 10-18 sont des autochtones.
Etape 3	Rencontrez les 18 chefs des ménages. Expliquer le projet. Obtenir leur consentement. Remplissez la première partie de l'enquête. Prenez une photo de chaque participant. Informez le participant d'être à l'endroit X le lendemain a 6h00.
Etape 4	Etre sur que le lieu pour les jeux sont prêts et que il y aura déjeune pour les jouer pendant les jeux. Plus ou moins a 13h00.
Etape 5	Invitez le chef du village et deux nyumba kumi pour le jeu 3B. Ca va commencer plus ou moins a 10h00.
Etape 6	Imprimez les photos. Parce que les pilles sont pas trop fort nous devons charger les pilles au moment d'imprimer. Donc, c'est a vous d'être sur que vous avez trouve un groupe pour charger pendant le soir ou la nuit. Vous devez trouver et payer pour le pétrole nécessaire.
Etape 7	Oubliez pas : Pendant les jours des cartographie retournez aux ménages qui n'étaient pas présent. Pour être sur que nous allons obtenir toute les informations de tout le monde dans ce village. Si le ménage n'est vraimant pas présent pendant notre temps dans ce village obtenir les coordinat GPS de maison, remplir le nom de personne sur la « FICHE DE CARTHOGRAPIHE » et la chiffre AL/DL et écrivez pourquoi la personne n' est pas la et si possible les autres détails : peut être l' aide de chef ou les voisins peuvent aider.

Jour des jeux (1 jour)

Etape 1	Réveille à 5h00. Un membre d'équipe va préparer le lieu des jeux : créer trois endroits isoles, être sur nous avons les 18 **« FICHE DE JOUER »** présent et dans l'ordre, les jetons pour la sélection au hasard, etc. Un membre va imprimer les dernières photos. Et un membre d'équipe va attendre pour les joueurs et être sur que toute les 18 vont arriver. Si les gens ne sont pas encore la a 6h30 envoyer des enfants ou les nyumba kumi. Parce que : nous DEVONS travailler avec 18 joueurs. Si il y a moins de 18 joueur nous devons trouver (au hasard) les replacements avant de commencer.
Etape 2	Remplissez les chiffres (1-18) et le nom de joueurs de l'autre cote de photo. Utiliser vos **« FICHE DE JOUER »**.
Etape 3	Le chef d'équipe va mettre au dos toutes les photos est verifier que nous avons les chiffres 1 jusqu'a 18.
Etape 4	Le chef d'équipe va prendre les photos, crier le nom de personne et verifier si : 1. Le personne et présent (mètre une « V » sur le dos de photo) et 2. Si la photo correspond à le nom.
Etape 5	Prenez une photo de toutes les 54 photos. C'est une vérification pour Peter que vous avez imprime vraiment toute les photos.
Etape 6	Introduisez le jour : donnez l'histoire de doctorat de Peter, etc.
Etape 6	Chaque membre d'équipe va sélectionne un joueur (1-18) au hasard par utiliser les jetons 1-18. Maintenant jouez les jeux 1, 2 et faites la séance pour jeux 1. Trois participants jouent en même temps dans un endroit isole (chacune avec un membre présent).
	Information avant les jeux :
	« Maintenant nous allons jouer quelques jeux. Tout est confidentiel et complètement anonyme. Donc, d'autres villageois et même d'autres joueurs ne doivent pas savoir votre comportement et votre décision pendant les jeux. Celle ci est une pièce fantastique et très importante pour vous. Chaque pièce vaut 1 point. Vous allez jouer quelques jeux et pendant ces jeux votre but est d'obtenir beaucoup de points. Si vous jouez attentivement avec votre pièce fantastique vous pouvez obtenir beaucoup de points. Et pour vous, c'est mieux d'avoir beaucoup de points. La raison est que demain il y aura une loterie et c'est seulement une personne qui gagnera le cadeau. Plus avez beaucoup de points plus vous aurez la chance de gagner ce cadeau. Donc, une autre fois, c'est votre but d'obtenir le plus de points que possible en faisant les choix attentivement avec votre pièce fantastique. » *« Kwa sasa tunataka fanya micezo. Yote itafanyika kwa siri kabisa. Wakaaji wengine na hata wengine wacezaji hawapashwe juwa ginsi uliceza na msimamo wako wakati wa mucezo. Hiki ni kitu kizuri na cha lazma sana kwako. Kila kitu cha namna hiki kina alama moja. Utafanya micezo, na wakati ya micizo, shabaha yako ni kupata alama mingi kabisa. Ukiceza kwa makini na hiki kitu kizuri, unaweza pata alama mingi. Ni ya lazma kwako upate alama mingi. Sababu ni kwani kesho kutakuwa mucezo wa tombola na niule mutu mwenye atapata alama migi zaidi ndiye atapewa matabishi. Kadiri unaalama mingi, kadiri una bahati yakupata ilematabishi. Mara tena, ni shabaha yako, upate alama mingi iwezekanovyo ukitumiya vizuri kabisa hiki kitu. »*
	Règles jeu 1 :
	« Maintenant vous êtes en train de jouer. Souvenez vous que d'autres personnes vont jouer comme vous. Je vais chaque fois vous présenter une photo. Au total, il y a 17 photos et 1 photo pour chaque joueur. Pour chaque photo, nous allons vous donner une « pièce fantastique » pour jouer. Vous avez 2 options : garder la pièce ou contribuer

	la pièce pour la personne sur la photo. Si vous gardez cette pièce vous obtenez 1 point. Si vous contribuez pour la personne sur la photo il y aura 2 possibilités. Souvenez vous que d'autres personnes sur ces photos vont aussi jouer comme vous. Si l'autre personne contribue pour vous votre contribution va doubler. Donc, vous aurez 2 points. Mais si l'autre personne décide de ne pas contribuer pour vous vous perdez votre contribution et donc vous aurez 0 point. Vous allez contribuer pour une personne si vous avez confiance que elle aussi va contribuer pour vous. Si vous pensez que l'autre personne va garder sa pièce vous pouvez aussi garder la vôtre. » *« Sasa unaanza ceza. Ujuwe kama wengine watu nao watacheza vilevile kama wewe. Kila mara ndakuonyesha picha moja. Kwa jumla kutakuwa picha kumi na kenda. Kila mucezaji atakuwa na yake picha. Kwa kila picha tutakupa kitu hiki kimoja kwa kuceza. Uko na namna mbili yakuceza: Unaweza weka hiki kitu, wala kukitoleya kwa mutu anaye kuwa ku picha. Uki weka hiki kitu unapata alama moja. Uki kitoleya kwa mutu anaye patikana ku picha kutakuwa namna mbili: Ukumbuke tena kama watu wengine wenyi kuwa ku hizi picha watacheza vilevilekama na weye, mutu mwengine akikutoleye kitu kile, alama zako zita zidishwa mara pili, maana yake utapata alama mbili. Alakini mutu mwengine akikatala kukutoleya, unapoteza alama zako, maana yake utapata sufuri. Nikusema utatoleya kwa mutu Fulani kama una uhakika kama naye atakutoleya. Ukiwaza kama mutu mwengine hatakutoleya kitu kile kizuri, anaweza bakiyana chako. »*
	Règles jeu 2 :
	« Maintenant vous voyez les 17 photos au même moment. Tous ces joueurs vont aussi jouer le même jeu. Cette fois vous avez les 5 pièces supers. Chaque pièce super compte 3points. Pour chaque pièce vous avez 2 options : Garder ces pièces ou contribuer ces pièces aux autres joueurs. Mais par ce que vous avez 5 pièces vous pouvez contribuer au maximum a 5 joueurs. Si vous gardez cette pièce vous allez obtenir 3 points ;si vous contribuez a une personne sur les photos il y aura deux possibilités. Si l'autre personne contribue pour vous nous allons doubler votre contribution et vous allez avoir 6 points. Mais si la personne décide de contribuer pour d'autres personnes que vous ; vous allez perdre votre contribution et recevoir 0 point. Maintenant, vous allez faire votre décision différemment au jeu précédent, ou vous avez fait votre décision photo par photo ; ici, vous allez faire votre décision au même moment. Souvenez vous que les autres personnes sur les photos vont aussi jouer le même jeu avec 19 photos y compris la votre et peuvent contribuer seulement a un maximum de 5 personnes. Pour être clair, vous devez contribuer pour des personnes pour qui vous avez plus de confiance que elles aussi vont contribuer pour vous. Souvenez vous que si vous n'avez pas suffisamment confiance que les 5 autres personnes vont contribuer pour vous ;vous pouvez toujours garder le reste de vos pieces. » *« Sasa ,angaliya hizi picha kumi na saba kwa limoja. wacezaji hawa wataceza nao mucezo uleule. Marahaba iko na vitu tano viziri sana. Kila kitu kina alama tatu. Kwa kila kitu uko na namna mbili: Kucunga kile kitu ao kukitoleya kwa wacezazi wengine. Alakini hivi uko na vitu tano tuu, unaweza vitoleya kwa zaidi wacezaji tano. Kama unaweka kitu kimoja utakuwa na alama tatu. Kama unatoleya kitu hiki kwa mumoja kati ya hawa wanaopatikana ku hizi picha kutakuwa namna mbili: kama mutu mwengine anakutoleya tuna zidisha alama zako,na utapata alama sita. Alakini, kama mutu mwengine ana amuwa kutokutoya na kutoleya wengine utapoteza alama zako na utapata sufuri. Sasa utaamuwa umbalimbali na micezo ya mbele kwenyi ulifanya uamuzi picha kwa picha, hapa utaamuwa kwa limoja. Ukumbuke kama hawa wengine watu kwa hizi picha nao watacheza mucezo huu na picha kumi na kenda nayako ikiwa ndani na wana weza kutoleya tuu kwa zaidi, watu tano. Kwa mwangaza zaidi, una pashwa toleya kwa watu wenye una uhakika kabisa kama nao watakutoleya. Ukumbuke, kama hauna uhakika kabisa ya kama wale watu tano wengine watakutoleya, unaweza weka bitu byenye bilibaki. »*
Etape 7	Apres les jeux 1 et 2, mettre en l'ordre les 18 fiches est nous allons commencer avec jeux 3A et 3B. Le joueur et l'ordre des deux jeux doivent être au hasard. Donc utilisez les jetons 1-18 et les jetons A-B pour sélectionnez votre : 1. Jouer et 2. Premier jeux (3A ou 3B). Donc, par exemple vous avez sélectionnez « 4 » et « A » vous allez jouer les jeux avec le jouer 4 et les jeux dans l'ordre : 3A, 3B et la séance d'information. La séance est toujours a la fin. Aussi la séance est seulement au niveau de comportement de jouer au jeu 3A. Le jeu 3B est public. Donc ensemble avec le chef du village et des autres notables. Etre sur que les autres joueurs sont pas présents! C'est important parce que si les autres jouer déjà vu les règles des jeux ca peux influencer sont comportement pendant les jeux.
	Règles pour jeu 3A et 3B :
	« Maintenant nous allons jouer un autre jeu. Cette fois-ci, ce n'est pas nécessaire de penser aux comportements et a la décision d'autres joueurs pendant le jeu. Nous allons vous présenter chaque fois une photo. Pour chaque photo nous allons vous donner 5 pièces fantastiques. Chaque pièce vaut 1 point. Pour chaque photo vous pouvez garder autant que vous voulez de ces 5 pièces, ou contribuer le reste aux autres personnes qui sont sur ces photos. Vous aurez les points correspondants aux nombres des pièces fantastiques que vous aurez. Le joueur qui

	est sur ces photos aura des points correspondants au nombre des pièces obtenues. » *« Sasa tanataka ceza mara ingine. Marahaba, si lazma kuwaza kuhusu namna yakuceza ya wengine. Kila mara tutakuonyesha picha moja. Kwa kila picha tuta kupa vitu tano vizuri . Kila kitu ni alama moja. Kwa kila picha unaweza weka kadiri upendavyo, bya kubaki unaweza vitoleya kwa watu wenye kupatikana ku hizi picha. Utapata alama kufwatana na hesabu yabitu ulivyo weka. Mucezaji anaye kuwa kwa hii picha atapata alama kufwatana na hesabu ya vitu vizuri uliyo mutoleya. »*
	N'Oubliez pas : si vous avez déjà jouer le jeu 3A ou 3B, la deuxième fois que vous jouez le jeu (donc 3B ou 3A) placez quelque chose sur les réponses déjà données par l' enquêté. Raison ? Pour ne pas influencer le comportement de jouer.
	N'oubliez pas : Avant de commencer jeu 3A soulignez une autre fois que ce jeu est complètement anonyme et isole. Aussi, pendant jeu 3B être sur que le joueur va s' introduire chez les notables et que pendant le jeux les notables font attention.
Etape 8	Apres les derniers jeux il reste seulement l'enquête sur la parente avec les autres joueurs : la grande enquête. Faites ca colonne par colonne, donc photo par photo.
Etape 9	Manger ensemble avec les joueurs. Pendant ce temps le chef de équipe va calculer les point pour chaque jouer. Utiliser le « FICHE CHEF D'EQUIPE ». Les autres deux va distribuer le payement pour chaque joueur (2,000 CFR pour chacune) et remercier les joueurs pour s leur participation.
Etape 10	Expliquer pourquoi la loterie est importante et pourquoi nous ne donnons pas les points pour chaque personne. Faites la loterie et un joueur va gagner un extra 2,000 CFR et un stylo de l'Université Columbia.
Etape 11	Dire « au revoir » a tous les joueurs et nettoyer le endroit.

Après retour du terrain

Etape 1	Etre ensemble est garder les fiches dans les enveloppes brunes : village par village. Etre sur que vous avoir toute les fiches : AL/DL (si applicable) quatre fois, toutes les fiches de la cartographie, les 18 fiches des joueurs et le fiche chef d'équipe. Faire ca trois fois : une fois pour chaque village.
Etape 2	Le chef d'équipe va envoyer un email a Peter avec : 1. Sommaire de travaille dans le trois village, 2. Demande pour l'argent pour les trois villages suivants. Peter va envoyer l'argent via Western Union.
Etape 3	Prenez deux jours de repos.

SELECTIONEZ 18 MENAGES

Un exemple d'AL ou DL (ou « LISTE » si vous êtes en train de travailler dans un village sans une liste AL ou DL et vous avez créer la liste) est donné comme le tableau blanc ci-dessous. Maintenant, ajoutez une colonne sur les deux faces d'indiquer pour chaque ménage si ce ménage est un ménage migrant (« M ») ou un ménage autochtone (« T »). Remplir le «M» s et le "T" dans ces colonnes que vous faites ensemble avec le chef et autres personnes. Ajouter une colonne supplémentaire et écrivez les numéros de membre de différents groupes. Pour illustrer cela, les colonnes grises ont été ajoutées ci-dessous.

#	Migrants (M) ou autochtone (T)?					Migrants (M) ou autochtone (T)?	#
1	M	1	Nom du Ménage 1	37	Nom du Ménage 37	T	26
1	T	2	Nom du Ménage 2	38	Nom du Ménage 38	T	27
2	T	3	Nom du Ménage 3	39	Nom du Ménage 39	T	28
3	T	4	Nom du Ménage 4	40	Nom du Ménage 40	T	29
2	M	5	Nom du Ménage 5	41	Nom du Ménage 41	M	12
3	M	6	Nom du Ménage 6	42	Nom du Ménage 42	T	30
4	T	7	Nom du Ménage 7	43	Nom du Ménage 43	T	31

En bas de la page écrivez le nombre total de ménages migrants et le nombre total de ménages autochtones. Par exemple:

M=41
T=90

Maintenant, nous devons sélectionner 9 ménages migrants et 9 ménages autochtones au hasard. Utilisez le tableau à la page suivante pour sélectionner ces 9 ménages pour chaque groupe.[1] La colonne à gauche indique les différentes tailles des types possibles. S'il vous plaît choisissez la ligne qui correspond au nombre des personnes dans le groupe (vous avez déjà compté cela et écrit sur le bas de la page). Lorsque vous avez identifié la ligne correcte, s'il vous plaît regardez la colonne suivante dans la même ligne. Il ya 10 colonnes avec chacune un numéro. Ce chiffre indique le numéro du type de ménage à choisir.

Par exemple, il ya 41 migrants et 90 ménages autochtones dans le village. La ligne 41 donne les chiffres suivants: 6, 9, 15, 16, 27, 28, etc. Dépasser la liste AL/DL (ou LISTE), vous encerclez les ménages qui ont un «M» et ces chiffres. Pour les ménages autochtones, vous allez faire la même chose. Encercler les ménages qui ont un "T" et le numéro suivant (voir la ligne 90 du tableau): 2, 7, 16, 23, 37, 48, 75, 83, 90. Ecrivez le nom des personnes sélectionnees et son chiffre AL/DL/LISTE immédiatement sur les **« FICHE DE JOUER »**.

Le remplacement

Prenez le type de ménage le plus proche suivant sur la liste AL/DL est pas encore sélectionne. Et aussi écrivez le nom de personne sélectionne et son chiffre AL/DL/LISTE immédiatement sur les **« FICHE DE JOUER » .**

[1] random.table = function(n, max.pop, seed=0, intervals=F, min.pop=n, fine=1){
get.n.randm=function(j) {sort(sample(1:j, n, replace=F))}
get.n.fixed=function(j) {sort(round(j*runif(1)+(1:n)*(j/n))%%j+1)}
if(seed>0){set.seed(seed)}
s<-seq(min.pop, max.pop, fine)
ifelse(intervals, x <- t(sapply(s, get.n.fixed)), x <- t(sapply(s, get.n.randm)))
data<- as.data.frame(cbind(s, x))
names(data) <- c("Size", 1:n)
View(data)
write.csv(data, "C:/Users/Peter van der Windt/Dropbox/drc_network_project/04_protocol/tableforselectionhh_9_9.csv")
}
random.table(9,400, seed=20120223, intervals=F)

TABLEAU NOMBRES ALEATOIRES POUR SELECTIONNER 9 MENAGES POUR CHAQUE TYPE (MÉNAGES MIGRANTS OU AUTOCHTONES)

Size	1	2	3	4	5	6	7	8	9
9	1	2	3	4	5	6	7	8	9
10	1	2	3	4	5	7	8	9	10
11	1	2	4	5	6	7	8	10	11
12	1	2	3	4	5	6	7	8	12
13	2	3	4	5	8	9	10	11	13
14	1	2	5	6	8	10	11	13	14
15	1	4	7	8	9	10	11	12	13
16	1	2	3	5	6	8	9	11	13
17	3	5	6	9	11	12	13	14	16
18	1	4	6	8	9	13	14	17	18
19	2	4	5	6	9	11	14	17	19
20	3	6	7	8	12	14	16	19	20
21	2	3	6	7	8	14	15	20	21
22	1	6	7	8	9	10	13	16	19
23	4	5	6	9	15	16	19	21	23
24	4	5	10	14	15	16	18	19	20
25	1	7	9	11	12	15	19	23	25
26	2	6	10	11	14	16	17	23	25
27	1	2	7	8	9	11	13	22	25
28	1	3	4	12	13	16	21	24	27
29	2	6	8	9	14	16	19	20	28
30	5	8	13	14	23	24	25	28	29
31	1	5	7	8	9	10	16	18	20
32	1	7	10	18	19	23	24	28	31
33	2	5	10	11	13	20	29	30	32
34	1	4	5	7	10	11	19	22	29
35	1	4	5	13	18	20	24	30	33
36	2	17	19	20	29	30	31	35	36
37	2	6	7	9	11	12	13	31	34
38	4	7	9	11	15	16	26	30	35
39	1	7	16	17	20	21	24	27	35
40	5	8	16	19	21	26	34	36	37
41	6	9	15	16	27	28	35	36	38
42	2	14	19	20	22	28	36	38	41
43	1	3	11	19	20	21	23	24	43
44	5	8	13	14	22	23	33	37	39
45	3	10	14	16	20	22	28	40	44
46	4	15	17	23	25	27	36	42	45
47	4	6	15	17	19	32	34	37	38
48	3	4	6	15	21	28	35	36	42
49	6	11	23	31	36	38	40	43	45
50	4	18	19	25	33	36	37	40	45

Size	1	2	3	4	5	6	7	8	9
51	3	7	22	28	34	37	39	48	51
52	4	5	6	19	26	36	37	39	44
53	7	12	16	17	37	38	40	52	53
54	6	11	20	23	26	31	33	49	50
55	7	14	16	19	20	33	44	49	51
56	5	21	23	24	34	43	48	50	54
57	6	11	16	23	29	34	38	39	42
58	11	15	17	21	22	23	41	52	58
59	4	9	13	14	34	35	51	58	59
60	2	3	8	20	34	40	41	44	49
61	7	9	20	30	42	47	48	60	61
62	10	13	18	36	39	43	46	51	61
63	29	31	37	51	52	54	55	57	60
64	2	13	15	22	27	38	40	45	61
65	1	2	14	15	19	40	45	55	59
66	4	20	21	35	44	47	51	63	65
67	2	7	8	9	17	21	22	58	60
68	4	6	20	21	23	33	34	45	51
69	3	15	27	29	33	41	47	54	64
70	1	4	8	10	19	32	49	66	69
71	4	10	12	13	17	36	42	50	58
72	2	9	47	48	54	57	64	67	70
73	18	21	26	31	33	35	38	50	65
74	14	16	25	36	38	42	51	67	68
75	15	26	28	34	36	42	46	47	54
76	8	12	19	20	28	31	43	54	64
77	12	19	37	42	51	61	67	68	69
78	11	35	44	56	65	69	70	72	73
79	5	7	10	11	18	29	34	43	58
80	11	17	34	35	54	57	68	73	76
81	16	18	22	27	54	56	57	63	81
82	3	6	34	36	39	50	55	59	64
83	2	17	19	29	48	52	54	55	75
84	1	3	19	21	31	38	45	49	80
85	4	5	16	30	47	48	52	65	78
86	6	16	32	37	43	51	61	67	80
87	2	7	21	26	32	40	42	44	76
88	12	15	36	42	73	76	78	81	84
89	2	6	25	30	37	46	52	60	65
90	2	7	16	23	37	48	75	83	90
91	6	31	59	68	72	76	83	86	90
92	16	27	29	61	65	73	79	89	90
93	11	13	20	49	58	63	66	68	70
94	17	23	27	29	49	55	71	81	92
95	8	38	40	50	60	65	77	80	86
96	12	20	32	47	56	77	78	90	95
97	10	30	44	55	57	63	66	75	77
98	3	6	10	13	19	46	65	73	96
99	2	10	43	45	52	54	57	63	94
100	9	20	29	30	47	63	74	79	92

Size	1	2	3	4	5	6	7	8	9
101	12	22	26	28	39	44	63	78	97
102	9	17	19	34	55	59	61	79	87
103	23	42	48	53	59	66	70	86	87
104	29	31	33	40	44	46	50	62	101
105	7	21	31	37	54	56	61	64	99
106	4	13	20	23	36	67	78	83	88
107	8	14	38	45	51	84	87	92	99
108	3	17	21	26	61	69	71	75	90
109	3	9	28	40	54	62	68	73	107
110	17	22	32	46	53	55	72	86	97
111	3	12	27	33	59	69	71	94	111
112	24	32	35	40	46	65	71	92	99
113	10	13	21	45	47	71	91	94	113
114	6	26	38	43	47	52	81	85	103
115	14	20	33	41	42	56	76	99	101
116	3	16	17	41	70	72	91	98	100
117	1	2	20	22	25	42	50	72	73
118	2	22	29	34	41	46	81	93	117
119	1	14	18	23	32	38	40	76	78
120	24	26	29	37	38	43	71	81	84
121	17	41	52	65	66	97	100	104	115
122	3	7	19	63	65	105	109	111	119
123	6	37	65	67	71	91	107	108	121
124	1	7	22	29	69	72	76	90	120
125	14	19	23	55	56	68	79	81	82
126	48	65	77	99	100	105	113	116	118
127	1	12	26	43	62	80	96	114	121
128	16	34	40	43	60	72	73	78	107
129	2	31	35	57	73	76	80	105	123
130	27	45	53	55	60	65	80	112	125
131	12	17	33	41	70	82	84	123	127
132	3	12	37	39	41	48	64	85	122
133	5	33	35	39	44	68	87	90	119
134	53	77	85	86	94	97	99	126	132
135	12	26	48	71	72	75	77	81	88
136	7	14	53	59	61	68	74	97	107
137	7	9	32	50	55	59	83	91	136
138	17	39	55	58	61	84	91	122	132
139	4	23	31	59	86	87	105	130	133
140	15	21	53	56	57	98	115	119	130
141	24	39	50	63	66	82	94	103	137
142	4	11	26	60	61	96	113	120	138
143	17	41	56	98	101	112	132	137	141
144	6	17	40	67	73	83	84	137	143
145	27	42	49	81	82	88	92	100	101
146	10	20	44	50	109	120	126	139	142
147	37	47	52	53	54	66	97	113	130
148	4	18	30	50	75	86	105	147	148
149	11	23	46	54	56	65	108	142	146
150	21	51	90	114	118	125	139	142	143

Size	1	2	3	4	5	6	7	8	9
151	19	20	24	30	53	60	76	95	143
152	7	17	74	79	87	110	116	127	151
153	15	19	21	39	41	98	123	145	151
154	39	42	58	80	87	105	110	131	147
155	5	40	60	76	95	97	111	124	143
156	13	25	30	32	37	79	94	127	145
157	62	67	72	103	115	128	132	135	156
158	2	9	33	70	88	95	96	104	136
159	2	16	24	35	38	73	98	105	157
160	27	36	46	97	118	123	135	139	145
161	11	14	52	62	72	79	91	119	143
162	5	41	51	74	98	100	130	156	161
163	6	27	43	68	85	95	134	136	159
164	59	97	103	105	112	113	117	130	156
165	10	22	39	58	60	70	83	149	154
166	20	40	46	52	57	92	120	141	150
167	13	28	49	73	82	90	111	121	144
168	20	24	42	50	61	86	112	148	154
169	16	55	61	80	84	89	130	132	157
170	3	14	23	26	39	57	64	68	164
171	32	35	42	57	65	77	116	118	157
172	14	25	48	57	94	121	142	147	156
173	18	21	39	69	121	154	167	170	172
174	7	25	62	93	109	118	126	150	157
175	23	26	53	57	93	102	130	132	138
176	10	31	32	44	78	80	95	130	140
177	15	44	59	63	64	80	90	140	154
178	40	42	49	53	92	107	129	138	174
179	54	71	81	110	117	124	150	155	158
180	22	96	106	122	129	131	143	162	166
181	5	7	46	69	70	100	136	142	167
182	2	22	57	59	87	96	100	105	141
183	5	27	56	63	68	76	123	141	162
184	4	61	105	124	132	162	163	173	181
185	7	10	20	21	25	115	131	160	174
186	12	26	71	99	117	174	176	183	185
187	11	31	45	47	57	61	113	167	183
188	44	86	88	90	102	160	170	172	185
189	16	42	76	93	117	119	144	180	185
190	7	48	55	65	76	112	139	154	169
191	8	57	64	102	132	147	166	173	184
192	48	62	64	75	80	110	129	167	191
193	12	48	79	101	132	156	158	166	168
194	44	72	78	94	97	101	118	167	185
195	9	23	47	54	100	112	137	179	192
196	93	106	115	124	141	188	192	193	195
197	18	26	61	73	74	92	103	121	196
198	1	14	20	43	44	92	114	136	177
199	78	94	95	104	129	154	155	164	187
200	2	6	26	28	68	83	90	140	178

Size	1	2	3	4	5	6	7	8	9
201	25	32	45	74	86	95	135	149	173
202	36	50	77	101	116	120	128	155	193
203	14	21	30	100	140	141	151	178	191
204	40	57	110	118	128	132	146	171	188
205	54	69	71	91	98	102	137	150	151
206	54	60	72	74	89	92	166	177	199
207	7	15	24	34	51	59	95	102	118
208	14	39	43	59	73	87	119	176	202
209	5	14	89	94	102	122	155	187	188
210	5	13	21	23	40	193	198	206	208
211	5	40	98	115	136	159	167	187	211
212	11	31	94	96	100	123	158	178	212
213	11	121	144	163	165	176	183	192	200
214	9	15	32	74	108	184	199	205	206
215	33	107	126	130	154	169	171	178	186
216	14	53	58	68	71	101	118	177	204
217	14	19	22	51	56	68	97	106	187
218	25	44	55	89	106	110	115	122	180
219	26	80	92	119	127	139	156	157	197
220	75	94	128	169	173	175	183	198	204
221	20	45	71	117	180	184	195	200	204
222	13	44	72	74	89	92	125	165	199
223	7	46	63	79	95	109	131	137	142
224	10	45	46	87	89	91	95	127	137
225	30	37	102	109	123	148	195	196	220
226	15	72	94	124	143	149	185	199	200
227	16	27	53	66	97	199	204	219	222
228	4	22	86	101	115	122	150	180	216
229	14	29	86	95	98	116	174	204	212
230	7	43	45	83	115	125	165	172	184
231	88	102	110	122	139	156	185	190	196
232	21	44	50	72	86	148	186	191	213
233	32	36	45	57	79	94	166	169	205
234	3	22	37	74	110	119	141	189	195
235	17	41	65	72	87	91	93	190	232
236	17	19	27	43	45	57	137	149	221
237	67	78	96	110	137	172	185	213	222
238	57	64	110	130	133	150	162	219	225
239	14	19	39	99	101	172	195	199	202
240	1	17	21	48	67	94	104	138	178
241	80	85	97	99	100	102	160	202	214
242	52	53	75	87	100	147	168	202	228
243	16	20	27	59	63	71	117	178	237
244	16	44	48	137	151	202	214	215	230
245	32	51	84	117	138	143	183	205	230
246	64	67	76	112	127	131	199	203	206
247	20	61	68	74	113	186	201	232	245
248	32	40	55	78	95	104	170	190	195
249	12	49	90	106	117	119	122	178	222
250	7	8	92	105	126	177	180	207	218

Size	1	2	3	4	5	6	7	8	9
251	28	69	73	94	128	141	156	187	191
252	3	22	42	53	66	82	172	207	251
253	14	17	124	164	169	214	237	239	249
254	21	41	42	78	86	92	188	195	224
255	30	51	59	99	102	112	114	160	190
256	9	62	93	109	206	218	235	238	244
257	1	2	13	63	82	131	143	154	249
258	40	42	52	58	148	163	166	179	238
259	5	7	81	115	153	175	196	221	231
260	40	80	90	98	124	158	180	238	250
261	6	70	84	101	108	152	185	229	241
262	7	12	33	54	102	103	156	210	228
263	10	22	46	97	127	153	171	172	212
264	4	35	108	124	127	223	232	239	264
265	14	155	165	190	195	197	228	240	250
266	26	35	54	65	103	175	180	211	222
267	13	47	58	82	195	200	232	258	266
268	20	80	123	141	149	176	218	259	262
269	16	65	74	114	128	148	203	220	249
270	38	45	98	104	117	127	149	194	236
271	53	111	118	130	145	215	228	266	271
272	54	91	138	152	186	221	226	245	251
273	3	27	30	39	50	59	100	161	168
274	14	52	57	98	127	173	232	243	257
275	26	48	55	77	122	126	141	213	217
276	32	35	42	122	148	158	241	251	271
277	16	25	52	99	109	137	160	192	275
278	39	68	88	104	129	167	225	245	269
279	36	54	68	119	182	183	238	239	244
280	3	30	39	53	128	131	147	166	245
281	35	44	69	70	72	220	235	255	264
282	16	31	44	75	88	142	154	167	278
283	3	41	119	126	170	171	210	214	225
284	21	42	46	107	122	133	215	246	272
285	118	119	188	193	210	231	237	242	273
286	54	94	114	130	140	186	203	236	248
287	12	41	46	58	62	143	185	265	267
288	23	63	78	84	86	87	91	92	136
289	27	37	71	101	108	151	168	175	275
290	37	116	146	189	191	219	221	223	265
291	57	73	141	173	195	219	225	238	285
292	36	90	100	130	185	191	256	263	275
293	19	89	93	116	168	180	192	217	285
294	125	129	133	153	159	169	219	253	268
295	7	38	95	184	247	257	265	270	290
296	3	7	55	59	94	107	152	183	220
297	53	76	132	172	178	212	217	232	239
298	8	29	96	100	170	172	196	255	281
299	79	91	169	189	210	218	240	264	272
300	29	47	116	121	142	163	223	275	300

LIVRE DE CODE

Codes Généraux	
Ne sait pas	-9
Non applicable	-8
Refus de répondre	-7

Les codes utilisés pour cette enquête sont les mêmes que les codes utilisés pour l'évaluation TUUNGANE. Seulement les codes **X**, **T**, **U** et **V** sont nouveaux et sont donnés immédiatement ci-dessous. Les autres codes peuvent être trouvés soit dans le livre de code que vous utilisez déjà pour l'évaluation TUUNGANE, ou dans les pages ci-dessous.

Code X. Pourquoi pas d'enquête?	
Pas de temps	A
Pas de confiance	B
A besoin de l'argent ou autre chose	C
Autre	D

Code U. Motivation pour aller a ce village.	
J'ai de la famille dans ce village	A
Je me suis marié a quelqu'un ici	B
Il est proche de mes champs	C
Il y a moins de conflit dans ce village	D
Ce village a beaucoup d'ONGs	E
Il y a une école ici	F
Il y a un centre de santé ici	G
Ce village est plus riche	H
Il y a du travail dans ce village	I
Il y a une mine proche	J
la vie est moins chère ici	K
Il y a un puits ici (source d'eau)	L
Je suis venu pour suivre l'église	M
Faire du commerce	N
Passer les vacances	O
Pour la cérémonie (enterrement, mariage, etc.)	P

Assistance	Q
Autre	R
Achète parcelle (pour maison)	S

Code A: Activité	
< 5 Ans	00
Agriculteur	05
Elève ou Etudiant	01
Retraité	02
Chômeur ou sans occupation	03
Ménager(e)	04
Eleveur	06
Agriculteur et Eleveur	07
Pêcheur	08
Commerçant	09
Fonctionnaire d'Etat	10
Salarié dans le secteur privé	11
Enseignant	12
Religieux	13
Militaire/Combattant	14
Creuseur	15
Travailleur du sexe	16
Autre travail qualifié	17
Autre travail non qualifié	18

Code C. Contribution au bien publique	
J'ai été payé	1
j'ai été forcé	2
Les gens m'ont dit de le faire	3
Beaucoup de gens participent	4
Le projet bénéficie du village	5
Il me donne des avantages	6
Il bénéficie mon église / mosquée groupe	7
Il bénéficie mon groupe ethnique	8
Salongo	9
Autre	50

Code B. Religions	
Catholique	1
Protestant	2
Musulmane	3
Témoins de Jehova	4
Kimbanguiste	5
Anglican	6
Sans Religion	7
Autre	50

Code Z. Raison pour contribuer			
POURQUOI CONTRIBUER		**POURQUOI NE PAS CONTRIBUER**	
J'attends que lui / elle va contribuer pour	1	Je ne m'attends pas que lui / elle contribue à pour moi	18
Nous sommes amis	2	On n'est pas ami	19
Nous sommes de même famille	3	J'ai une dispute avec lui / elle	20
Nous sommes des voisins	4	Quelqu'un de ma famille a une dispute avec lui / elle	21
Nous sommes membres de même église	5	Il/elle n'est pas un membre de notre église	22
Il/elle est beaux/belle	6	Je ne le/la connais pas	23
Il/elle est riche	7	Cette personne n'est pas de notre groupe ethnique	24
Nous faisons des affaires ensemble	8	Il/elle est un sorcier	25
Il/elle est une ami/ famille de chef	9	Il/elle est/était un soldat/militaire	26
Il/ elle est important dans le village	10	Il/elle est migrant	27
Je le/la connais	11	Il/elle est contre le chef	28
La personne en a besoin	12	Il/elle est problématique	29
Nous sommes membres de même groupe ethnique	13		
Il/elle est un migrant	14	AUTRE	
Il/elle est un autochtone	15	Et donnez plus d'information	50
Nous avons étudie ensemble	16		
Nous avons été ensemble dans le même endroit pendant la violence dans le village	17		

Code L. Langues Maternelles							
Aushi (K)	1	Chokwe (K)	9	Kaonde (K)	17	Ruund (K)	25
Bangubangu (M)	2	Fuliru (S)	10	Lal-bisa (K)	18	Sanga (K)	26
Banyamulenge (S)	3	Havu (S)	11	Lamba (K)	19	Shi (S)	27
Bemba (k)	4	Hemba (K)	12	Lega (S,M)	20	Taabwa (K)	28
Bembe (S)	5	Holoholo (K)	13	Luba-Kasai (K)	21	Tembo (S)	29
Buwa (K)	6	Joba (k)	14	Luba-Katanga (K)	22	Tetela (M)	30
Buyu (K)	7	Kabwari (K)	15	Lunda (K)	23	Vira (S)	31
Bwile (K)	8	Kanu	16	Nyindu	24	Kikusu	32
						Kinande	33
						Kihunde	34
Swahili	100	Chinoise	110			Kinyabuisha	35
Français	101	Autre Congolais	111			Kirwanda	36
Lingala	102	Autre Etranger	112			Kinyarwanda	37

Code R. Location.

Pays			
Burundi	P1	Tanzanie	P6
Cameroun	P2	Uganda	P7
Kenya	P3	Zambie	P8
R de Congo	P4	Autre Afrique	P10
Rwanda	P5	Orient	P11
		Occident	P12

Codes Préfères!	
Ce village	A1
Un autre village dans cette chefferie	A2
Un autre village hors de cette chefferie mais dans ce territoire	A3
"La brousse" /foret dans cette chefferie	A4
"La brousse" /foret hors de cette chefferie mais dans ce territoire	A5

District	Territoire	CODE
Kinshasa 10		
Kinshasa Rural	Communes de Kinshasa Rural	1010
Kinshasa Urbain	Communes de Kinshasa Urba	1020
Bas Congo 20		
Bas Fleuve	Tshela	2031
Bas Fleuve	Seke-Banza	2032
Bas Fleuve	Lukula	2033
Bas Fleuve	Muanda	2034
Cataractes	Mbanza Ngungu	2041
Cataractes	Songololo	2042
Cataractes	Luozi	2043
Lukaya	Madimba	2051
Lukaya	Kasangulu	2052
Lukaya	Kimvula	2053
Bandundu 30		
Mai Ndombe	Inongo	3021
Mai Ndombe	Kiri	3022
Mai Ndombe	Oshwe	3023
Mai Ndombe	Kutu	3024
Kwilu	Bulungu	3031
Kwilu	Masi Manimba	3032
Kwilu	Bagata	3033
Kwilu	Idiofa	3034
Kwilu	Gungu	3035
Kwango	Kenge	3051
Kwango	Feshi	3052
Kwango	Kahemba	3053
Kwango	Kasongo Lunda	3054
Kwango	Popokabaka	3055
Plateaux	Bolobo	3061
Plateaux	Kwamouth	3062
Plateaux	Mushie	3063
Plateaux	Yumbie	3064

District	Territoire	CODE
Equateur 40		
Equateur	Basankusu	4021
Equateur	Bolomba	4022
Equateur	Ingende	4023
Equateur	Bikoro	4024
Equateur	Lukolela	4025
Equateur	Makanza	4026
Equateur	Bomongo	4027
Sud Ubangi	Gemena	4031
Sud Ubangi	Budjala	4032
Sud Ubangi	Kungu	4033
Sud Ubangi	Libenge	4034
Nord Ubangi	Mobayi Mbongo	4051
Nord Ubangi	Yakoma	4052
Nord Ubangi	Businga	4053
Nord Ubangi	Bosobolo	4054
Mongala	Lisala	4061
Mongala	Bumba	4062
Mongala	Bongandanga	4063
Tshuapa	Boende	4071
Tshuapa	Befale	4072
Tshuapa	Djolu	4073
Tshuapa	Ikela	4074
Tshuapa	Bokungu	4075
Tshuapa	Monkoto	4076

District	Territoire	CODE
Orientale 50		
Kisangani	Communes de Kisangani	5010
Tshopo	Banalia	5021
Tshopo	Bafwasende	5022
Tshopo	Ubundu	5023
Tshopo	Opala	5024
Tshopo	Isangi	5025
Tshopo	Yahuma	5026
Tshopo	Basoko	5027
Bas Uele	Buta	5031
Bas Uele	Aketi	5032
Bas Uele	Bondo	5033
Bas Uele	Ango	5034
Bas Uele	Bambesa	5035
Bas Uele	Poko	5036
Haut Uele	Rungu	5041
Haut Uele	Niangara	5042
Haut Uele	Dungu	5043
Haut Uele	Faradje	5044
Haut Uele	Watsha	5045
Haut Uele	Wamba	5046
Ituri	Irumu	5051
Ituri	Mambasa	5052
Ituri	Djugu	5053
Ituri	Mahagi	5054
Ituri	Aru	5055

District	Territoire	CODE
Nord Kivu 61		
Nord Kivu	Nyiragongo	6121
Nord Kivu	Walikale	6122
Nord Kivu	Lubero	6123
Nord Kivu	Beni	6124
Nord Kivu	Rutshuru	6125
Nord Kivu	Masisi	6126
Nord Kivu	Commune de Goma	6127
Maniema 62		
Maniema	Kabambare	6221
Maniema	Kibombo	6222
Maniema	Lubutu	6223
Maniema	Pangi	6224
Maniema	Kasongo	6225
Maniema	Punia	6226
Maniema	Kindu	6227
Maniema	Kailo	6228
Sud Kivu 63		
Sud Kivu	Walungu	6321
Sud Kivu	Uvira	6322
Sud Kivu	Fizi	6323
Sud Kivu	Mwenga	6324
Sud Kivu	Shabunda	6325
Sud Kivu	Kalehe	6326
Sud Kivu	Idjwi	6327
Sud Kivu	Kabare	6328
Sud Kivu	Commune de Bukavu	6329

District	Territoire	CODE
Katanga 70		
Lubumbashi	Communes de Lubumbashi	7010
Likasi	Communes de Likasi	7020
Lualaba	Dilolo	7041
Lualaba	Sandoa	7042
Lualaba	Kapanga	7043
Haut Lomami	Kamina	7051
Haut Lomami	Kaniama	7052
Haut Lomami	Kabongo	7053
Haut Lomami	Malemba Nkulu	7054
Haut Lomami	Bukama	7055
Tanganika	Kalemie	7061
Tanganika	Moba	7062
Tanganika	Manono	7063
Tanganika	Kabalo	7064
Tanganika	Kongolo	7065
Tanganika	Nyunzu	7066
Haut Katanga	Kipushi	7071
Haut Katanga	Sakania	7072
Haut Katanga	Kasenga	7073
Haut Katanga	Mitwaba	7074
Haut Katanga	Pweto	7075
Haut Katanga	Kambove	7076
Kolwezi Urbain	Communes de Kolwezie	7090
Kolwezi Rural	Mutshatsha	7093
Kolwezi Rural	Lubudi	7094

District	Territoire	CODE
Kasai Oriental 80		
Mbuji Mayi	Communes de Mbuji Mayi	8010
Tshilenge	Miabi	8021
Tshilenge	Kabeya Kamwanga	8022
Tshilenge	Lupatapata	8023
Tshilenge	Katanda	8024
Tshilenge	Tshilenge	8025
Sankuru	Lusambo	8031
Sankuru	Kole	8032
Sankuru	Lomela	8033
Sankuru	Katako Kombe	8034
Sankuru	Lubefu	8035
Sankuru	Lodja	8036
Kabinda	Mwene Ditu	8041
Kabinda	Kamiji	8042
Kabinda	Ngandajika	8043
Kabinda	Kabinda	8044
Kabinda	Lubao	8045
Kasai Occidental 90		
Kananga	Communes de Kananga	9010
Lulua	Dibaya	9021
Lulua	Luiza	9022
Lulua	Kazumba	9023
Lulua	Demba	9024
Lulua	Dibelenge	9025
Kasai	Luebo	9031
Kasai	Tshikapa	9032
Kasai	Ilebo	9033
Kasai	Mweka	9034
Kasai	Dekese	9035

P PARENTE AVEC LE CHEF DE MENAGE		P UNIQUEMENT SI AUCUN LIEN DE PARENTE(LE PLUS FORT)	
Chef de ménage	1	Deplace / Refugié avec aucun lien de parenté	75
Père/ Mère	2	Oncle «Africain »	15
Grand parent	3	Neveu « Africain »	16
Epoux / relation religieuse	4	Ami	20
Enfant (incl. adoption)	5	Ami de la Famille	25
Frère ou sœur	6	Est dans la meme organisation professionnelle	30
Oncle ou tante	7	Ils font du commerce ensemble régulièrement	40
Nièce ou Neveu	8	Voisin	55
Petit fils / Petite-fille	9	Meme organisation Religieuse	45
Beaux-parents	10	Deplace, non de la famille	75
Beau-frère/sœur	11	Autre	-10
Cousin	12		
Autre parent de la famille	13		
Beau fils / Belle fille	14		

I : CODE NIVEAU SCOLAIRE	
Ecole Maternelle/Aucun	00
Ecole primaire	
Année 1	1.1
Année 2	1.2
…	..
Année 6	1.6
Ecole secondaire	
Année 1	2.1
Année 2	2.2
…	…
Année 6	2.6
Université ou Institut Supérieur	
G1	3.1
G2	3.2
G3	3.3
L1	3.4
L2	3.5
DOC 3	3.6
DOC 4	3.7
Enseignement Professionnel	4.1
Enseignement Technique	4.2
Refuse de Repondre	-7
Non Applicable	-8
Ne sait pas	-9
Autre	-10

A.2 The Congo: Migration Mapping Manual and Survey

GUIDE DE CARTHOGRAPHIE

QUESTIONS EN HAUT :

Chiffre AL:
Posez la question pour le nom de chef du ménage et trouver ce nom sur la liste AL/DL. Si le nom n'est pas la, augmentez le nom sur la liste AL/DL avec votre premier lettre du nom (de chercheur) avant le chiffre.

Dans ménage:
Combien des personnes habitent dans ce ménage : incluez les déplaces !

Maisons (AV, AP):
Le nombre des maisons qui existent avant l'arrivée de déplacées dans le ménage, et le nombre de maisons après. Donc, si le ménage n'est pas une famille d'accueil, les deux sont le même. Si le ménage n a pas construit les maisons pour les déplace les deux chiffres sont aussi le même.

FEM. :
Nombre des femmes de chef de ménage. Si monogame c'est une, si polygame c'est plus d'une.

Poule. :
Nombre des poules/ canards/ dindons dans ce ménage.

Déplacé :
Nombre des déplaces dans le ménage. Si pas une famille d'accueil c'est zéro. Si la famille est une famille d'accueils vous devez remplir l'information sur les déplaces dans ce ménages a l'autre cote. Et pour le boite à droite : les déplaces reste dans combien des maisons ? Si les déplaces restent dans la même maison de famille d'accueil c'est « zéro ».

[A]:
Occupation et utiliser le code [A].

[L] :
Langue maternelle et utiliser le code [L].

Swah. :
La personne connait Swahili : oui (1), non (0).

Age :

Sexe :
Homme [H], Femme [F]

5ys ici :
Croyez vous que vous habiterez dans ce village d'ici cinq ans ?

Ch. vo :
Si vous avez le moyen, est-ce que vous pouvez acheter un champ dans ce village ?

Ch. pep :
Si vous avez le moyen, est-ce que possible pour vous d'acheter un champ dans ce village ? Pour l'enquêteur : Peut être quelques gens sont interdits (par exemple par le chef ou mwami) d'acheter les champs dans ce village.

02 :
Latitude en Décimal Dégrées.

028 :
Longitude en Décimal Dégrées.

Mètre :
Altitude en mètres.

Nom NK et chiffre AL :
Nom de la nyumba Kumi est trouvez sont chiffre AL/DL sur la liste AL/DL.

D, E, F :
Cocher votre première lettre.

QUESTION D'IDENTITE :

___h___ :
L'heure d actuelle

UNIV / ONG :
Encerclez l'histoire que vous allez donner a l'enquête. Si le dernier chiffre de minute est impair donnez l'histoire « UNIV ». Si le dernier chiffre de minute est pair donnez l'histoire « ONG ». Les étapes sont ici :

Etape 1 (Règles de jeux)	Voici cinq jetons comprenant cinq identités différentes. Une personne peut avoir toute ces identités. Ces identités ont des importances différentes pour vous. Cette a vous de placer ces identités celons des importances de la plus important jusqu'a les moins importants.
Etape 2	Donnez l'histoire « UNIV » ou l'histoire « NGO » :
« UNIV »	*« Nous sommes des étudiants. Nous travaillons avec l'université Columbia. Nous ne sommes pas ici pour les projets et nous n'allons rien distribuer. C'est juste pour une recherche scientifique. »*
« ONG »	*« Nous sommes des étudiants. Nous travaillons avec l'Université de Columbia. Vous n'avez pas des bénéfices directs. Mais nous allons partager les résultats des cette recherche avec des grandes organisations de Bukavu. Par exemple, IRC, UNHCR et UNOCHA. »*
Etape 3	Maintenant travaillez ensemble avec l'enquête et arrangez les cinq jetons des identités selon l'importance de répondant.

L'HISTOIRE MIGRATION

Maintenant c'est à l'enquête de donner son histoire de migration. Pendant ce temps vous remplissez les histoires de votre enquête. Créer les carrés. Est chaque carré indique un endroit ou l'enquête a été pendant un mois et plus. Dans ces carré vous remplissez : le nom de village et le nom de la chefferie. Si

l'enquête a été dans plusieurs endroits (donc plus d'un carré) c'est à vous de créer les flèches entre les carrés : chaque flèche indique un déplacement. Pour chaque flèche vous devez remplir trois chois :

1. Le motif de déplacement et utiliser code [U]. Creuser un petit peu. C'est possible que il y a plus d'une lettre de code [U] qui est applicable. Si le motif est pour le travaille (« I » pour code [U]) posez une extra question : « C'est quel type de travail ? ». Si la personne dit que c'est pour le travail de minerais c'est a vous d'ajouter un astérisque chez le « I » donc « I* » est aussi préciser dans le « Remarque » c'est quelle type de minérais, rôle, etc.
2. Nombre des personnes qui ce sont déplace avec l'enquête. Premièrement le nombre qui a quitté le village précédent ensemble avec l'enquête. Et aussi le nombre qui est arrive avec l'enquête dans le village. Par exemple, la personne a quitté Kasheke avec 100 personnes et est arrive à Mweha avec 40 personne. Donc vous devez remplir « 100/40 ».
3. L'année de déplacement

Faites ca pour chaque déplacement (donc chez chaque flash) !

Nous ne sommes pas encore prêts ! Aussi ajoutez l'information sur les champs. Posez la question ou la personne a les champs. Créer un rectangle qui indice un champ et place ca dans le village ou ce trouve les champs. Si le champ est dans un village pas encore créé, créez un nouveau carré avec le nom de village et chefferie dedans et puis aussi le rectangle pour les champs. Dans tous les rectangles écrivez le nombre de champs et l'année d'obtention pour chaque champ.

Maintenant les maisons. Faire la même chose comme les champs, mais pas créer un rectangle mais déssinez une case. Ecrivez l'année de construction de chaque maison. Si le ménage a reconstruit la maison plus d'une fois remplissez l'année de la première construction de maison ! Par exemple, si l'enquête a construit une maison en 1980 mais la pluie a détruit cette maison et l'enquêté a construit une nouvelle maison en 2010. Ca c'est une maison et cette maison a été construit a 1980. Vérifier que les nombre de maisons sont les mêmes comme vous avez déjà rempli a la question en haut.

Aussi – si applicable – ajoutez les lettres « N », «M » et « D ». « N » indique le village de naissance, donc vous devez remplir ca pour chaque personne. « M » indique le village ou ce passe le mariage et aussi écrivez l'année ! Finalement, le « D » indique le lieu de décès. Bien sur c'est seulement pour les gens qui sont morts : aussi écrivez l'année de décès et l'année de naissance.

Et faites ca pour le chef de ménage et toutes les femmes de ce chef de ménage. Par exemple, si le chef de ménage n'est pas présent faire l'enquête avec la femme de chef du ménage. L'information sur le chef du ménage est toujours dans le premier endroit ! Aussi si vous êtes en train de faire l'enquête avec son épouse. Obtenir ;'information sur toute les femmes de chef du ménagé. C'est très probable que la femme de chef de ménage ne connaît pas l'histoire de migration des autres femmes. Dans ce cas vous signalez dans Remarques.

Finalement, à la fin, mettre la lettre « E » dans la rubrique de la personne enquêtée.

QUESTIONS EN BAS :

Remarque :
Toujours être très complet. Si il y a quelque chose intéressante ou relevant de notre recherche c'est a vous de remplir ca ici.

INFORMATION SUR FAMILLE D'ACCUIL :

Reste chez (historique !) :
La première page est toujours pour le ménage propre. Mais aussi le ménage propre peut avoir été dans une famille d'accueil. Par exemple, le ménagé X a été arrive en 1980 et reste pour deux mois dans le ménage Y. Mais âpres les deux mois le ménage X a construit sa propre maison. Maintenant vous êtes chez le ménage X – qui est un propre ménagé. Mais la famille d'accueil pour le ménagé X c'est le ménage Y. Maintenant remplissez l'information sur le ménage Y.

Nom :
C'est le nom de chef du ménage Y.

Al :
C'est le chiffre AL/DL sur la liste AL/DL. Si la personne n'est pas sur la liste AL/DL il y a deux options : 1. Le ménage Y est dans le village mais pas sur la liste. Maintenant vous devez ajouter ce ménage sur le liste AL/DL (oubliez pas votre première lettre). 2. Le ménage n'existe pas dans le village. Par exemple, le ménage a été déménage ou le chef de ménage est mort. Maintenant, signaler le lieu ou il se trouve ménage Y maintenant.

Langue [L]:
Langue de chef de ménage Y.

Pourquoi ménage [P]:
Pourquoi il a choisi ce ménage Y pour accueil. Et très important écrivez la relation de ménage X avec le ménage Y (utiliser le code [P])!

PARENTE AVEC LES CHEFS:

Loc. :
Remplissez la parente entre le chef du ménage et le chef de localité.

Chef :
Remplissez la parente entre le chef du ménage et le chef de LLU ou vous êtes en train de travailler.

NK :
Remplissez la parente entre le chef du ménage et le nyumba kumi.

INFORMATION SUR LES PROJETS :

Projets :
Ici sont les projets que l'enquête vous a donne qui ont eu lieu dans ce village pendant les derniers 6 mois. Important, le premier jour vous êtes ensemble avec le chef et obtenir une liste avec tous les projets récents dans ce village. Si l'enquête ne vous donne pas tous les projets c'est a vous d'ajouter les autres projets.

Sait :
Pour les projets qui a été donne par l'enquête vous complétez « 1 ». Pour les autres c'est « 0». Maintenant replissez les questions suivantes seulement si nous avons un « 1 ».

Qui :

Qui de votre ménage a participe pour ce projet. Par exemple, si le homme, 2 femme est 3 enfants ont aide vous devez remplir : « H, F2, E3 ».

C.O :
Est-ce que vous avez contribué en main d'œuvre ?

C.$:
Est-ce que vous avez contribué en argent?

C. Mat:
Est-ce que vous avez contribué le matériel?

Sal.:
Ce projet a été un salongo ?

ONG:
C'est un projet d'une ONG ?

Reçu $:
Est-ce que votre ménage a reçu l'argent pour votre participation. Si oui, spécifier.

M/Ann. :
Depuis quand le projet a commence ?

[C]:
La raison pour la contribution et utiliser le code [C].

Score:
Estimation de l'importance de ce projet pour le ménage. Entre 0 et 10. Très important, aussi replissez cette information pour les projets que l'enquête ne connais pas. C'est possible que âpres, vous posez la question pour un projet ou nous avons sais= « 0 », l'enquête va dire « Ah, je connais ce projet. Maintenant, PAS CHANGER votre information. C'est toujours sais= « 0 ».

ONG PAUVRE :
« Croyez vous qu'une ONG va intervenir dans ce village dans le cadre de développent et pour les pauvre d'ici une année ? » La réponse doit être présentée sous forme de score entre 0 et 10.

ONG DEPLACE :
« Croyez vous qu'une ONG va intervenir dans ce village dans le cadre de déplaces d'ici une année ? ». La réponse doit être présente sous forme de score entre 0 et 10.

CHECKLIST :
Vérifiez si vous n'avez pas oublié quelques l'information. Cocher les options.

AUTRE :

Pourquoi ce village :

Si la personne n'est pas ne dans ce village, nous voudrions savoir avec un petit peu de détails pourquoi le ménage a choisi ce village.

AUTRE COTE :

Ici il y a toute l'information pour les déplaces. Donc ici il y a seulement quelque chose si le ménagé propre est aussi un ménage d'accueil. Ici remplir la même information comme a l'autre cote. Donc, n'oubliez pas l'information sur les projets et aussi pas les questions sur l'identité. Important, pour le dernier voyez votre montre pour une deuxième fois pour savoir si c'est l'histoire « UNIV » ou l'histoire « ONG ».

QUESTION ET REPONSE

Q1 : Si il y a une veuve et l'homme (donc l'homme est mort) de cette veuve avait 3 femmes ?
R1 : C'est trois ménages différents. Mais pour chaque veuve écrivez l'histoire de migration pour l'homme.
Q2 : Si la personne a déjà construit plus d'une maison dans le même endroit ?
R2 : Ecrivez l'année de la première construction.

NOM CHEF MENAGE:

Chiffre AL/DL	# dans HH	# maison AV	# maison AP	# fem.	# poul	# déplacé		[A]	[L]	Swah.	Age	Sexe	5ysici ?	Chvo	Chpe	02.
																028.
Nom NK et chiffre AL :											D O E O F O					mètres

___h___	UNIV / ONG
	Groupe ethnique
	Membre village
	Déplacé
	Pauvre
	Congolais

Sexe	Langue	Age

Sexe	Langue	Age

Remarque :

ONG PAUVRE :	
ONG DEPLACE:	

Reste chez (historique!):	[P] :	Projets :	Sais	Qui	C.O	C.$	C.Mat	Sal.	ONG	Reçu $	M/Ann.	[C]	Score
Nom :	Loc. :	1.											
AL :	Chef :	2.											
Langue [L] :	NK :	3.											
Pourquoi ce ménage [P] :													
Pourquoi ce village :													
Vill. O ; Chefferies O ; Raison déplacement O ; Année O ; Nombre A/B O ; N, M, et D O ; Champs/maison et année O; Info sur les minerais O. Autre cote (les déplacés qui reste dans famille accueil) : Info au haut O, histoire migr. O, projets O, identité O, pourquoi choisie ménage O.													

A.3 The Congo: Player and Team Leader Survey

CODE AA:	
Vous :	

Q 1 Joueur (1-18) Les premières 9 sont les déplaces !)		Q 2 Village:		
Q 3 Déplace ou autochtone?	O D O A	Q 4 Nom du jouer et code AL?		

SELECTIONNEZ CHEF DE MENAGE

Sélectionnez chef de ménage

Q 5 Chiffre du fiche AL ou DL (ou votre nouvelle code. E123, D237, F132, etc.)			
Q 6 Participation	O Volonté de participer O HH ne peut être trouvé O HHH pas présent O Refuse de participer (Remplissez **Q 7** *à* **Q 9**)	O Volonté de participer O HH ne peut être trouvé O HHH pas présent O refuse de participer (Remplissez **Q 7** *à* **Q 9**)	O Volonté de participer O HH ne peut être trouvé O HHH pas présent O refuse de participer (Remplissez **Q 7** *à* **Q 9**)
Q 7 Age [années]			
Q 8 Sexe	O H O F	O H OF	O H O F
Q 9 Pourquoi ne pas disposé à participer à l'enquête? [**Code X**. opinion enquêteur]			

Consent

"Je travaille pour un projet de l'Université de Columbia qui recherche comment et pourquoi les gens coopèrent entre eux. Je voudrais vous demander de participer à la collection de données «Migration et Connexion dans l'Est du Congo « Ce projet fait partie des thèses du Neelanjan SIRCAR et Peter VAN DER WINDT. Les deux sont candidats au doctorat à l'Université Columbia. Le but de ce projet - et de leur thèse en général - est ni politique ni lucratif. La recherche est menée pour comprendre pourquoi les gens coopèrent et avec qui. Pour ce faire, nous aimerions jouer à un jeu de bien public. Le jeu prendra un jour de votre temps. Après les jeux, nous tenons également à mener une enquête. Vous serez indemnisé pour participer à l'étude de 2,000 CFR. En outre, plus vous jouez, plus vous avez la chance de gagner cette somme. Il n'y a aucun avantage direct pour vous. Les avantages de ce projet seront pour la société en général. Comprendre qui et pourquoi les gens coopèrent est important pour le développement. Les données qui seront recueillies ne seront pas connectées à votre nom. Votre participation à cette étude ne comporte aucun risque. Prendre part à ces jeux et a cette enquête est votre choix. Vous pouvez décider de ne pas prendre part ou arrêter à tout moment. En outre, pour les jeux aimeriez-vous prendre une photo. Nous allons également prendre une photo des 17 autres joueurs. Demain pendant les jeux vous pourrez alors voir leurs photos. Les 17 autres participants verront votre photo quand ils joueront. Apres les jeux vous pouvez garder votre photo. êtes-vous d'accord de participer?"

Q 10 Le HHH comprend et accepte: jouer aux jeux, l'enquête, et nous de prendre une photo?	O 1 *[Si « non », trouver une HH remplacement et faire Q 6]*

O Prendre une photo de HHH et imprimez le numéro et nom de cette personne sur l'image.

O Donner au HHH une « Invitation»"

O Remerciez le répondant et lui dire d'être présent au jour X, temps Y, à Z.

Q 11 Description Jouer (pour aider imprimer les photos):	

ENQUETE JOUER

Vous :	

L'enquête

Q 12 Occupation **[CODE A]**				
Q 13 Position dans village				
Q 14 Sait il lire et écrire?	O 1 O 0			
Q 15 Education ? **[CODE I]**				
Q 16 Religion ? **[CODE B]**				
ICI HISTOIRE DE Q 19 :		Q 17 Croyez-vous que vous habiterez dans ce village d'ici cinq ans?		O 1 O 0
		Q 18 Préfériez-vous habiter dans ce village d'ici dans cinq ans?		O 1 O 0
		Q 19 Quels groupes ou type de personne bénéficie le plus des ONGs (les migrants, l'autre groupe ethnique, le chef)? [FAITES DISCUSSION ET ECRIVEZ L'HISTOIRE]		
ICI HISTOIRE DE Q 20:		Q 20 Qui aide les ONG à implémenter les projets (les sages, l'autre groupe ethnique, le chef)? Faites discussion !		
Q 21 MARIAGE. Type : Sœur (S), Fille (F). Et localisation **[CODE R]**.				
Q 22 Combien de fois chaque mois vous quittez votre village?		Q 23 Le ménage possède combien de moutons ou chèvres?		
Q 24 Le chef du village est de votre famille biologique?	O 1 O 0	Q 25 Combien d'années avez-vous vécu dans ce village?		
Q 26 Combien de fois par semaine vous rencontrez le chef du village ?		Q 27 Etes-vous membre d'un comité ou une association du village (développement, eau, éducation, etc.)?		O 1 O 0
Q 28 Votre ménage a combien de poules/ dindons/canards?				

Q 29 Ne dans ce village ?		Q 30 Lange maternelle ?	
Q 31 Quand arrive ?			

O Remerciez le répondant et lui dire d'être présent au jour X, temps Y, à Z.

CODE BB	
Vous :	

JEUX ET SÉANCE D'INFORMATION

Ci-dessous: Rayez l'endroit de réponse pour le nombre correspondant au joueur. Répondez avec "0" (ne contribue pas) ou "1" (contribue). "Pourquoi?" Peut contenir des réponses multiples. Donner plus d'informations que seuls ***CODE Z*** *si nécessaire !*

JEU 1 :

Q 32 Début: ____h____; Q 33 Expliquer ___ fois. Q 34 Fin: ____h____ ; Q 35 Participant a compris le jeu: O 1, O 0.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Q 36 JEU 1																		

JEU 2 :

Q 37 Début: ____h____; Q 38 Expliquer ___ fois. Q 39 Fin: ____h____ ; Q 40 Participant a compris le jeu: O 1, O 0.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Q 41 JEU 2																		

SÉANCE D'INFORMATION JEU 1 :

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Pourquoi? **CODE Z** Pour JEU 1 !!																		

Q 42 Plus d'information (aussi pourquoi le personne a change sont comportement entre 3A et 3B):

CODE BB	
Vous :	

JEUX 3A :

Q 43 Début: ____h____; Q 44 Expliquer ___ fois. Q 45 Fin: ____h____ ; Q 46 Participant a compris le jeu: O 1, O 0.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Q 47 JEU **3A**																		

JEUX 3B :

Q 48 Début: ____h____; Q 49 Expliquer ___ fois. Q 50 Fin: ____h____ ; Q 51 Participant a compris le jeu: O 1, O 0.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Q 52 JEU **3B**																		

Q 53 Qui présent (chef, NK)?	**Qui (nom complet)?**	**Parente avec jouer ? [P]**	**Qui (nom complet)?**	**Parente avec jouer ? [P]**
	CHEF			

SÉANCE D'INFORMATION JEUX 3A:

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Pourquoi? **CODE Z** Pour 3A !!																		

Q 54 Plus d'information:

(Si vous avez besoin plus d'espace continuez de l'autre cote)

Q 55 « Chère jouer, Jeux 3A et 3B sont différent. Qu'a été la différence ? Et dans quelle façon à la présence des notables influencé votre comportement pendant le jeu 3B?	

Vous :	

Image:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Q 56. Vous la connaissez																		
Q 57. Fois par semaine																		
Q 58. Famille biologique et type **[CODE P]**																		
Q 59. Famille Africaine																		
Q 60. Né dans ce village?																		
Q 61. Déplacer à cause de violence?																		
Q 62. Récolé/déplacé dans le même endroit ?																		
Q 63. Ami?																		
Q 64. Aller a marche pour vous ?																		
Q 65. Avez emploie pour votre champs																		
Q 66. Eté emploie pour son champs																		
Q 67. Travaille ensemble sur champs																		
Q 68. Voisin?																		
Q 69. Vote pour le même parti politique ?																		
Q 70. Parente avec chef **[CODE P]**:																		
Q 71. Ami du chef:																		
Q 72. Ami notables présent pendant 3B:																		
Q 73. Langue maternelle? **CODE L**:																		
Q 74. Religion? **CODE B**:																		

FICHE CHEF D'EQUIPE [UN PAR VILLAGE]

Q 1 Village :	

Les nyumba kumis dans le village [Ensemble avec le chef du village. S'il y a plus de 8 nyumba kumis, remplissez à l'autre cote] :

Nom complet de nyumba kumi :	Nyumba kumi depuis :	Chiffre sur la liste AL :
Q 2 :		
Q 3 :		
Q 4 :		
Q 5 :		
Q 6 :		
Q 7 :		
Q 8 :		
Q 9 :		

Les projets publics les plus récents au village [Ensemble avec le chef du village]:

Projet :	Latitude (E/W) in DD :	Longitude (N/S) in DD :	Altitude :	Salongo (0/1) :	$ (0/1) :	ONG (0/1) :	Mois/ Année
Q 10 _____	02.	028.					
Q 11 _____	02.	028.					
Q 12 _____	02.	028.					
Q 13 _____	02.	028.					

Qui a été présent pendant la création de la liste AL [Ensemble avec les personnes qui a l'info. Si plus de 8, remplissez à l'autre cote] :

Nom complet :	Chiffre sur la liste AL :	Position dans village :	Position dans RAPID :
Q 14			
Q 15			
Q 16			
Q 17			
Q 18			
Q 19			
Q 20			
Q 21			

Q 22 Liste AL/ DL a été crée avec une liste du village [cocher]:	O 0 ou O 1
Q 23 Date travaille dans ce village ?	

Les infrastructures publiques localisent dans village [Remplissez les données pendant la cartographie ! Si plus de 15, remplissez à l'autre cote]:

Infrastructure (type):	Latitude (E/W) :	Longitude (N/S):	Altitude :	Construire? (année)	Construire par :
Q 24 : _____	02.	028.			
Q 25 : _____	02.	028.			
Q 26 : _____	02.	028.			
Q 27 : _____	02.	028.			
Q 28 : _____	02.	028.			
Q 29 : _____	02.	028.			
Q 30 : _____	02.	028.			
Q 31 : _____	02.	028.			
Q 32 : _____	02.	028.			
Q 33 : _____	02.	028.			
Q 34 : _____	02.	028.			
Q 35 : _____	02.	028.			
Q 36 : _____	02.	028.			
Q 37 : _____	02.	028.			
Q 38 : _____	02.	028.			

Structure de village, sous-villages et localité [Ensemble avec le chef]:

Comment est-ce que les déplaces sont arrivé dans ce village (écrivez une histoire !) ? Il y a une groupe déplacés ensemble proche de village mais qui est pas parte de cette village ? [Ensemble avec le chef]

Les quatre interventions par les ONGs plus récemment [Ensemble avec le chef du village]:

NGO :	Type du projet ?	Qui a bénéficie ?	Mois/Année :
Q 39 _____			
Q 40 _____			
Q 41 _____			
Q 42 _____			

Compter les points des joueurs pour la loterie

JEUX 1 :		A :															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DE :	1																
	2																
	3																
	4																
	5																
	6																
	7																
	8																
	9																
	10																
	11																
	12																
	13																
	14																
	15																
	16																

JEUX 2 :		A :															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DE :	1																
	2																
	3																
	4																
	5																
	6																
	7																
	8																
	9																
	10																
	11																
	12																
	13																
	14																
	15																
	16																

JEUX 3A :		A :															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DE :	1																
	2																
	3																
	4																
	5																
	6																
	7																
	8																
	9																
	10																
	11																
	12																
	13																
	14																
	15																
	16																

JEUX 3B :		A :															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DE :	1																
	2																
	3																
	4																
	5																
	6																
	7																
	8																
	9																
	10																
	11																
	12																
	13																
	14																
	15																
	16																

Personnes présente pendant jeu 3B (nous allons la connectez avec les fiches rempli pendant les jeux)

Q 43 Nom Complete	Q 44 Position dans ce village ?	Q 45 Ne dans ce village ?	Q 46 Quand arrive ?	Q 47 Lange maternelle ?	Q 48 Occupation **[CODE A]**

Compter les points:

	JEUX 1		JEUX 2		JEUX 3A		JEUX 3B		3A & 3B	TOTAL
	Dans poche [1]	Investir [2]	Dans poche [3]	Investir [4]	Dépensé [5]	Reçu des autres [6]	Dépensé [7]	Reçu des autres [8]	[9]	
1		+	+	+	-	+	-	+	+170	
2		+	+	+	-	+	-	+	+170	
3		+	+	+	-	+	-	+	+170	
4		+	+	+	-	+	-	+	+170	
5		+	+	+	-	+	-	+	+170	
6		+	+	+	-	+	-	+	+170	
7		+	+	+	-	+	-	+	+170	
8		+	+	+	-	+	-	+	+170	
9		+	+	+	-	+	-	+	+170	
10		+	+	+	-	+	-	+	+170	
11		+	+	+	-	+	-	+	+170	
12		+	+	+	-	+	-	+	+170	
13		+	+	+	-	+	-	+	+170	
14		+	+	+	-	+	-	+	+170	
15		+	+	+	-	+	-	+	+170	
16		+	+	+	-	+	-	+	+170	

[1] Pour chaque joueur (une ligne) ajoutez les « 0 ». Donc si un joueur a cinq fois un « 0 » c'est une indication que le joueur a garde les pièces fantastiques dans son pochette. Donc 5 points.
[2] Voyez le tableau pour jeu 1. Si il y a un « 1 » dans 2 endroits inverses (par exemple, pour personne 1 : [1,2] et [2,1] ; [1,3] et [3,1], etc.) le personne obtenir 2 points. Parce que c'est une indication que personne 1 a donnez a personne 2, et personne a donnez a personne 1. Et le même pour personne 1 et 3, etc. En total un joueur peux gagner un maximum de 34 points ici (17 *2).
[3] Pour chaque joueur (une ligne) ajoutez les « 0 » et multiple par trois. Raison ? Si il y a une « 0 » c'est l' indication que le joueur a garde la super pièce : une pièce de 3 points. Au maximum il y a 54 (3*17)
[4] Le même comme les jeux 1, mais maintenant le joueur peux contribuer au maximum 5 autres personnes. Donc si pour une personne il y a des endroits inverses ou les deux endroits a un « 1 » dans les deux endroits, le joueur gagne 3 points chaque fois.
[5] Pendant jeu 3 le jouer peux contribuer chaque fois au maximum 5. Donc ajouter toute le chiffres dans la ligne de jouer. Maintenant vous avec toute le dépense de cette jouer. C'est pourquoi il y a une « moins » dans le tableau. Parce que le joueur a perdu ces points.
[6] Pendant jeu 3 les gens peuvent aussi donner les pièces fantastique a vous. Maintenant, ajoutez tous le chiffres dans la colonne de jouer. Maintenant vous avez le totale de points que les autre jouer a donne a ce jouer.
[7] Le même comme [5].
[8] Le même comme [6].
[9] A la fin nous ajoutons 150 points parce que pour jeu 3A et pour jeu 3B le jouer a reçu 85 point (17*5)

MAINTENANT LA LOTERIE :
Vous devez créer les jetons pour chaque personne pour la loterie. Si une personne a plus des points, le personne a plus de jetons dans le façon suivent:

Nombre des points	**Nombre des jetons dans le sac aléatoire**
=<150	1
151-200	2
201-220	3
=>221	4

A.4 The Congo: Local Approval

COLUMBIA UNIVERSITY
IN THE CITY OF NEW YORK

New York, le 18 Juillet 2010

Cher Monsieur \ Madame,

Par la présente lettre j'aimerais solliciter votre autorisation, agrément, assistance, soutien et votre protection pour l'exercice de collecte de données sur la« Migration et Connexion dans l'Est du Congo ». Le projet implique la collection de données en interrogeant les villageois - dans l'Est du Congo. Dans quelques villages, quelques personnes vont être sélectionnees pour jouer un jeux qui a besoin au maximum de trente minutes pour chaque personne. Le but de cet jeux est de comprendre qui sont ces villageois et la connexion entre eux. Ce projet est une partie de la thèse de Péter **VAN DER WINDT** et **NEELAN SIRCAR**. Peter et Neelan sont Candidat au Programme de Doctorat en Sciences Politiques de l'Université de Columbia aux Etats Unis. Ses mémoires traitent et examinent les problèmes liés au développement.

Le but de cette collection de données – et de la thèse en général – n'est pas politique ni lucratif. La recherche est menée juste par passion pour ce pays et par conséquent pour comprendre en même temps les problèmes importants liés au développement. L'étude ne se fera pas en dehors des limites de la loi de la République Démocratique du Congo.

Pour plus d'informations n'hésitez pas à nous contacter à nos adresses emails pv2160@columbia.edu et ns2303@columbia.edu.

Merci beaucoup, pour Peter et Neelan,

Peter **VAN DER WINDT**
Candidat au Programme de Doctorat en Sciences Politiques
Université de Columbia

Date: KALEHE
Lieu: 22/04/2011

Cher Monsieur\ Madame,

J'ai pris connaissance de ce projet. Etant donné la nature de cette thèse, et le projet en particulaire, je soussigné, accorde l'autorisation et le soutient à **Peter VAN DER WINDT** et **Neelan SINCAR** pour le projet « Migration et Connexion dans l'Est du Congo ».
J'encourage et

sollicite aussi le concours de toute personne en ..... d'accorder leur soutient à Peter **VAN DER WINDT** et **Neelan SINCAR.**

Signature: L'Administrateur de Territoire ai

DEDE FUSA FUSA CIBUABUA

République Démocratique du Congo
Territoire de Kalehe
Province du Sud - Kivu

COLUMBIA UNIVERSITY
IN THE CITY OF NEW YORK

New York, le 18 Mars 2010

Cher Monsieur \ Madame,

Peter VAN DER WINDT est Candidat au Programme de Doctorat en Science Politique de l'Université de Columbia aux Etats Unis. Son mémoire traite et examine les problèmes liés au développement, en particulier la migration des populations et le bien être de ces populations – construction des routes, construction des puis, construction des écoles, etc. Pour son mémoire, **Peter VAN DER WINDT** va employer différent types de données pour obtenir des réponses aux questions qu'il a soulevées incluant : **1**. Mener des enquêtes, **2**. Géo-Cartographie, **3**. Mener et faciliter des jeux comportementales, **4**. Obtenir les données d'observation, **5**. Faire des interviews. Le but de son mémoire n'est ni politique ni lucratif. La recherche est menée juste par passion pour ce pays et par conséquent comprendre en même temps les problèmes important lies au développement. L'étude ne se fera pas en dehors des limites de la loi de la République Démocratique du Congo.

Par la présente lettre j'aimerais solliciter votre autorisation et agrément pour le travail lier a mon mémoire, votre assistance, soutiens ainsi que votre protection si nécessaire.

Pour plus d'informations n'hésiter pas à me contacter à mon adresse email pv2160@columbia.edu

Merci beaucoup.

Peter VAN DER WINDT
Candidat au Programme de Doctorat en Science Politique
Université de Columbia

Date: 22/04/2011

Lieu: KALEHE

A qui de droit,

Ce projet m'a ete présenté. Etant donner la nature de ce mémoire, je soussigné, accorde l'autorisation et le soutient à **Peter VAN DER WINDT** pour la collection de données nécessaire en vue d'obtenir les informations adéquates lui permettant d'achever le travail de son mémoire.

J'encourage et sollicite aussi le concours de toute personne en ..... d'accorder leur soutient à Peter **VAN DER WINDT.**

Signature: L'Administrateur du Territoire a.i.
DUMBOZA CIBUABUA

République Démocratique du Congo
Territoire de Kalehe
Province du Nord-Kivu

A.5 Siera Leone: Protocol for Data Collection

Master Instructions for Attribute-Based Allocation Game

March 2013

Schedule of Activities before a Visit

1. A week before the visit
    - Packing list
        i. Invitation letter (Njala University)
        ii. Pens
        iii. 10 white buttons
        iv. 40 black buttons
        v. Bikers signing sheet
        vi. Financial overview sheet
        vii. Light
        viii. Phone credit
        ix. Time table
        x. Map
    - A research assistant is sent to each village with a letter from Njala University explaining the activity. The letter includes an invitation to participate in the activity and invites 18 villagers.
        i. Ensure that potential participants understand they must be available the whole day and will not be paid until the end of the day before proceeding with participant selection.
    - The RA obtains permission from the Town Chief to conduct the activities. We will only proceed with permission from the chief.
    - The RA proceeds to select the participants. The RA ensures that in each village:
        i. Select the **nine** most important village big men or *Taa Gbakoi*: the chief, assistant chief, division heads, religious leader (imam), societal head, women's leader or elders.
            1. To make the selection, ask all High status [Taa Bakoi] to form a social status line up. Select the **nine** highest ranking individuals that are willing and able to attend. As a priority the Town Chief, Town Speaker, and Imam should all be in the participant list (even if the imam is not in the highest 9, by default they are invited)
        ii. Randomly select **nine** villagers/farmers
            1. For the randomization, please invite all villagers that are not big men, so farmers and youth. It may be the case that there are some high status individuals who were not selected as one of the nine in the previous exercise. They should NOT be included in the pool of villagers/farmers/youth. High status individuals not selected as one

of the nine most important people in the village simply have no chance of being invited.
    2. Put nine white buttons in a (non-see through) bag and as many black buttons as there are people remaining.
    3. Explain that they come forward one by one to draw a button. If they get a white button this implies they can participate.
- The RA writes down the names of all 18 people, their gender, father's name, mother's name, and social status on the **Participants List** – *Make sure to collect the white buttons once the name is written down.*
- The RA invites all 18 people to be present at the school in location X and time Y (see **time table**).
- The RA tells the participants not to send a representative and that they will be compensated for their time and will receive a small snack as well as a token of appreciation.
- Ask control questions
    i. When is the activity? What time?
    ii. Where is the activity?
    iii. How much time will you spend there?

2. A day before the visit
    - Wherever coverage is available, call the contact person listed on the forerunner's Treatment Village Checklist Sheet as a reminder that they should be present at the Site Town the following morning to participate in the activities.

Schedule of Activities during a Visit

1. Packing list
    - Tape and markers
    - Buttons
    - Pens
    - Participants List
    - Record sheets:
        i. Exit survey
        ii. Allocation game record sheet
        iii. Status Order Record Sheet.
        iv. Payment sheet
        v. Randomized Allocation Game pairs for pay-outs
2. When groups arrive, the team leader will again explain the purpose to the Town Chief (or highest ranking representative) of each group and obtain his permission to conduct the activities. We will only proceed with permission from the chief.
3. For the villages where all invited people showed up, check if you have at least 8 Taa Gbakoi and 8 Nu Gbamei.
4. Ask all present villagers to separate themselves into High status [Taa Bakoi] and Low status [Nu Gbamei]. If there are more then 8 in each group:
    - For High status [Taa Bakoi] ask them to form a social status line up. The 9th person in line is thanked for coming, paid 5,000, and returns home. **If the 9th person is the

Imam (and no other Imam remains in the group) then the Imam remains and the next lowest individual in the line returns home.

- For the Low status [Nu Gbamei]: If all 9 low status [Nu Gbamei] are present, let all remain and partake in the assignment of ID numbers in order to determine which participant returns home.

5. Randomly assign ID numbers to each of the two groups:
    - Place wood cubes numbered 1-8 into a non-see through bag. Invite each high status [Taa Gbakoi] one by one to draw a cube. Whatever number is on the cube drawn is that participant's ID number
    - Record the participant's name, parents' names, gender, and status in the corresponding row of the **Participants List.**
    - When all high status [Taa Gbakoi] have been given an ID, repeat the process with low status [Nu Gbamei] with cubes numbered 9-16 plus one blank cube if 9 low status [Nu Gbamei] showed up
    - The participant who drew a blank cube are thanked and told they will not be participating in the day's activities but will receive LE 5,000 as compensation for coming to the Site Town.
6. For each group complete the **Participants List**, write down each person's name as well as the name of their father and mother for their respective ID**.** Each RA team assigned to a group copies the **Participants List** so that each research assistant has a copy.
7. Have every participant wear a sticker with their ID code.
8. When all participants of the group have arrived give a brief introduction to the participants
9. Explain the procedures of the day and what they can expect
10. Implement Survey and Allocation Game.
    - Conduct **Individual Exit Survey** with all participants.
11. Debriefing for Allocation Game:
    - Ask if players truly understood the game, record on scale of 1 – 10 how well you feel they understood the game. Remind the participant to keep their actions secret.
12. Social line up:
    - Tell the participants: *Thank you for your great patience and cooperation. We have enjoyed working with you. Please line up in order of who is the most influential, second most influential, etc. in your village. The order you line up in is the order in which we will pay you privately the money you won today.*
    - Record a brief note about how they decide the queue order on the **Status Order Record Sheet**.
    - Record the order in which they line up on the **Status Order Record Sheet**.
13. Throughout, use the **Notes** section of each record sheet to record general observations of interest to the research team.
14. Pay the participants using the **Payment sheet** and the **Randomized Allocation Game Pair pay-out sheet**, add show-up fee of Le 1000 and if appropriate the silence tokens and thank them for their participation. Ensure that no participant receives less then Le 8,000 for the day.

Allocation Game and Survey Instructions

1. Do a brief game explanation to the group. Explain:

i. We will give you tokens; each token is worth 1 block. There are 25 tokens, so all together the tokens are 2,500 Leones.
ii. This is your money and there is no obligation to share.
iii. We will ask questions about sharing.
iv. Ask practice questions:
    - *How much is each token worth?*
    - *How much money are the tokens worth all together?*
v. Sometimes we will tell you the name of who you are sending the money to. Sometimes we don't tell you the name of who you are sending the money to.
vi. We will never tell the receiver or anybody what you send.
vii. If you send everything, send nothing, send some, we won't tell the receiver.
viii. Ask practice questions:
    - *Will you always know who you are sharing with?*
    - *Will the receiver know how much you sent?*
    - *Do you have to send money to the receiver? Can you send all your money to the receiver?*
ix. Do not tell anybody what you send or do not send.
x. You are given a silence token worth 10 block (1,000 Leone). At the end of the day you can get 10 block if you still have your silence token.
xi. If you talk about the game we take away your silence token.
xii. You will be paid based on one of your choices and a show-up fee.

2. Make sure you stress:
    - that their choices are anonymous and private
    - that they do not have to share equally, they can give as much or as little as they like
    - that for each question the game starts again
3. Each research assistant takes a participant to an isolated area and conducts the **Allocation Game** using a completed **Participant List**
4. There are two parts in the game:
    - **Part A Questions** with 6 questions and **Part B Questions** with 15 questions
    - The questions should be asked in a random order. See **Allocation Game Question Order Box** on record sheet
5. For **Part A** Questions tell the participant:
    - We will give you tokens, each token is worth 1 block. There are 25 tokens, so all together the tokens are 2,500 Leones.
    - This is your money and there is no obligation to send [Kwekwe].
    - You will be paid based on one of your choices. This could be any of the choices you make, so pay attention to all questions. For which choice you will be paid depends on chance.
    - For **Questions A1 – A6** tell the participant:
        i. Here are 25 tokens.
        ii. For **Question A1** say:
            a. The person receiving the money is a randomly chosen Taa Gbakoi (e.g. village chief, an imam, a division head, a societal head, a town

speaker, etc.) from a randomly chosen village in your chiefdom, not from your village.

b. We will not tell you who the Taa Gbakoi is, and they do not know who is kwekwe the money or how much you kwekwe.

c. How much do you want to kwekwe from this money given to you?

iii. For **Question A2** say:

a. The person receiving the money is a randomly chosen Nu Gbamei (e.g. farmer, youth, etc.) from a randomly chosen village in your chiefdom, not from your village.

b. We will not tell you who the person is, and they do not know who is kwekwe the money or how much you kwekwe.

c. How much do you want to kwekwe from this money given to you?

iv. For **Question A3** say:

a. The person receiving the money is a randomly chosen Taa Gbakoi (e.g. village chief, an imam, a division head, a societal head, a town speaker, etc.) from your village. He or she may or may not have come with you today from your village.

b. We will not tell the other person who is kwekwe the money or how much you kwekwe. You will not know who that other person is.

c. How much do you want to kwekwe from this money given to you?

v. For **Question A4** say:

a. The person receiving the money is a randomly chosen Nu Gbamei (e.g. farmer, youth, etc.) from your village. He or she may or may not have come with you today from your village.

b. We will not tell the other person who is kwekwe the money or how much you kwekwe. You will not know who that other person is.

c. How much do you want to kwekwe from this money given to you?

vi. For **Question A5** say:

a. The person receiving the money is a randomly chosen Taa Gbakoi (e.g. village chief, an imam, a division head, a societal head, a town speaker, etc.) from the people from your village that came with you today from your village.

b. We will not tell the other person who is kwekwe the money or how much you kwekwe. You will not know who that other person is.

c. How much do you want to kwekwe from this money given to you?

vii. For **Question A6** say:

a. The person receiving the money is a randomly chosen Nu Gbamei (e.g. farmer, youth, etc.) from the people from your village that came with you today from your village.

b. We will not tell the other person who is sending [kwekwe] the money or how much you send [kwekwe]. You will not know who that other person is.

c. How much do you want to send [kwekwe] from this money given to you.

6. For **Part B Questions** tell the participant:

- We will give you tokens; each token is worth 1 block (or Le 100). There are 25 tokens, so all together the tokens are 2,500 Leones.
- This is your money and there is no obligation to share [kwekwe].
- I have a list of names here with people from your village. To help identify the person I will also read out the have the name of the person's father and mother.
- I will ask you for each of them how much of the 25 tokens you are willing to send [kwekwe] to that person.
- For each person you are sharing [kwekwe] a new set of 25 tokens.
- The other person will never know who you are.
- We will never tell that person how much you send [kwekwe].

7. After the **Allocation Game** is complete the research assistant completes the **Individual Survey** with the participant.

A.6 Siera Leone: Instruments

Final instruments ADG 2013 Sierra Leone

Contents

Informed Consent

JOHN LIST, *Principle Investigator*

Give the informed consent form to the participant and talk it through with them.

My name is _____. I am a research associate hired by Njala University. I am here to conduct a study that will look at livelihoods and trading in villages around Gola Forest.

Before we begin, I would like to take a minute to explain why I am inviting you to participate and what I will be doing with the information you provide to me. Please stop me at any time if you have any questions. After I've told you a bit more about our project, you can decide whether or not you would like to participate.

This research is being conducted by researchers from Njala University in collaboration with Wageningen University and the University of Chicago. We will be interviewing about 1600 households in 100 villages near Gola Forest. The researchers will use the information we collect in articles that might be published, as well as in academic presentations.

Participation should take about one day. Participation in both the activities and the survey are on a purely voluntary basis. I will ask you some questions about yourself and your family. There are minimal risks to you from answering these questions. The information we collect today is private and confidential. We will not share any details from the survey about your friends or family with anyone besides the research team from Njala University and Wageningen University. These surveys will go to a secure location at Wageningen University.

If at any time and for any reason, you would prefer not to answer any questions, please feel free not to. If at any time you would like to stop participating, please tell me. We can take a break, stop and continue at a later date, or stop altogether. You will not be penalized in any way for deciding to stop participation at any time.

If you have questions, you are free to ask them now. If you have questions later, you may contact me by calling the research supervisor, Esther Richards, at 079-837708. You may also contact the researchers at the University of Chicago. Ty Turley is the student researcher responsible for this project, and he can be reached in the following ways:

Ty Turley
Department of Economics, 1126
E. 59th St. Chicago, IL 60615, USA
+1-773-702-9016, ty.economics@gmail.com

Esther Mokuwa
Research Coordinator
Njala University
079.837.708

If you have any questions about your rights as a participant in this research, you can contact the following office at the University of Chicago:

Social & Behavioral Sciences Institutional Review Board
University of Chicago
5835 South Kimbark - Judd 333, Chicago, IL 60637
Phone: (773) 834-7835, Fax: (773) 834-8700
Email: sbsirbwise@listhost.uchicago.edu

Site Town Information check list

NAME		CODES
DISTRICT	:	CODE: └──┘
CHIEFDOM	:	CODE: └──┴──┘
SITE TOWN	:	CODE: └──┴──┴──┘
ENUMERATOR	:	CODE: └──┴──┘
DATE	: ___ / ___ / 2013	

Check List

Activity	Checked?
Sent Bikes ahead to Treatment Villages to alert them of your arrival?	Yes / No
Got permission to use the school	Yes / No
Made sure drinking water for the villagers is available	Yes / No
Made sure the keys of the school will be handed over to the research team	Yes / No
Made sure that the school has 6 rooms. IF NOT: call us	Yes / No
Is there signal? IF YES: phone number headmaster:	Yes / No
Made sure that the village can host 16 RA's for 1 night	Yes / No

Contact table

Name	Function	Phone number
	School	xxxxxxxxxx
	Headmaster	
	Key holder	

Notes for research team

Village invitation check list

	NAME	CODES
DISTRICT	:	CODE: └──┘
CHIEFDOM	:	CODE: └──┴──┘
VILLAGE	:	CODE: └──┴──┴──┘
ENUMERATOR	:	CODE: └──┴──┘
DATE	: ___ / ___ / 2013	

Check list

Activity	Checked?
Received permission from chief	Yes / No
Wrote 9 *Taa Bakwi* on **the Participant List**	Yes / No
Wrote 9 ordinary people on **the Participant List**	Yes / No
Gave the invitation letter to the chief in front of **the Participants List**	Yes / No
Asked the test questions	Yes / No
All participants can answer the test question correctly	Yes / No
Made a copy of the participant list and has given it to the chief	Yes / No
Ask if the village has coverage and note down a phone number	

Contact table

Name	Function	Phone number

Notes for research team

Payment sheets

Date: Name enumerator_____
Name bike rider: _____
License number bike rider: _____
I hereby declare that I'm responsible for my passenger in case of any accident.

Signature bike rider:_____
Bike ride from _____to _____
Money paid: Le _____
License number driver: _____

Signature that he received the money: _____

Date: Name enumerator_____
Name bike rider: _____
License number bike rider: _____
I hereby declare that I'm responsible for my passenger in case of any accident.

Signature bike rider:_____
Bike ride from _____to _____
Money paid: Le _____
License number driver: _____

Signature that he received the money: _____

Date: Name enumerator_____
Name bike rider: _____
License number bike rider: _____
I hereby declare that I'm responsible for my passenger in case of any accident.

Signature bike rider:_____
Bike ride from _____to _____
Money paid: Le _____
License number driver: _____

Signature that he received the money: _____

Date: Name enumerator_____
Name bike rider: _____
License number bike rider: _____
I hereby declare that I'm responsible for my passenger in case of any accident.

Signature bike rider:_____
Bike ride from _____to _____
Money paid: Le _____
License number driver: _____

Signature that he received the money: _____

Date: Site Town: Amount paid: Le Signature:	Name enumerator:_____ Village Name (if applicable): Reason:
Date: Site Town: Amount paid: Le Signature:	Name enumerator:_____ Village Name (if applicable): Reason:
Date: Site Town: Amount paid: Le Signature:	Name enumerator:_____ Village Name (if applicable): Reason:
Date: Site Town: Amount paid: Le Signature:	Name enumerator:_____ Village Name (if applicable): Reason:
Date: Site Town: Amount paid: Le Signature:	Name enumerator:_____ Village Name (if applicable): Reason:
Date: Site Town: Amount paid: Le Signature:	Name enumerator:_____ Village Name (if applicable): Reason:
Date: Site Town: Amount paid: Le Signature:	Name enumerator:_____ Village Name (if applicable): Reason:

Participant List

DATE: ___/____/2013		Site Town name:		Site Town code:			
Group ID:		Village name:		Village code:			

Participant ID	Participant Name	Name of Father	Name of Mother	Gender F=female M=male	Social status
001					
002					
003					
004					
005					
006					
007					
008					
009					
010					
011					
012					
013					
014					
015					
016					
017					
018					

Status Order Record Sheet

Date of Visit (DD/MM/YY):	/ / 2013	Treatment:	1&5 2&6 3&ADG 4&ADG
Location:		Location Code:	
Chiefdom:		Chiefdom Code:	
Village Name:		Village Code:	
Enumerator Name:		Enumerator ID	

Status #	1	2	3	4	5	6	7	8
HH ID #								

Status #	9	10	11	12	13	14	15	16
HH ID #								

Comments	
1. Was there significant disagreement?	Yes No
2. Did people lobby for a higher spot in the social order?	Yes No
3. Did the chief and other high status people organize the order?	Yes No
4. Observations on how they decided the order:	

Payment sheet

DATE: ___/____/2013		Site Town Name:		Site Town Code:			
Group ID:		Village name:		Village code:			

Participant ID	Participant Name		Amount Allocation Game	Showup fee	Silence token	Total	Signature/RTP
001				1000		=	
002				1000		=	
003				1000		=	
004				1000		=	
005				1000		=	
006				1000		=	
007				1000		=	
008				1000		=	
009				1000		=	
010				1000		=	
011				1000		=	
012				1000		=	
013				1000		=	
014				1000		=	
015				1000		=	
016				1000		=	
017				1000		=	
018				1000		=	

Allocation game Record sheet

Date of Visit (DD/MM/YY):	/ /		
Site Town Name:		Site Town Code:	
Respondent name:		Respondent ID:	
Chiefdom:		Chiefdom Code:	
Village Name:		Village Code:	
Enumerator Name:		Enumerator ID	

Use Allocation Game Order Box below to see the order in which you should ask the questions for each ID
For Questions B the table lists the staring-point of the questions.

Allocation Game Question Order Box

ID	Question Order	ID	Question Order	ID	Question Order	ID	Question Order
1	A4, B[start at #2], A6, A5, A1, A3, A2	**5**	A4, A2, A6, A1, A3, B [start at #9], A5	**9**	A4, B[start at #2], A6, A5, A1, A3, A2	**13**	A4, A2, A6, A1, A3, B [start at #9], A5
2	A5, A6, A1, A4, A3, B [start at #3], A2	**6**	A3, B [start at #11], A2, A5, A4, A6, A1	**10**	A5, A6, A1, A4, A3, B [start at #3], A2	**14**	A3, B [start at #11], A2, A5, A4, A6, A1
3	A1, A3, A6, A4, A5, A2, B [start at #5]	**7**	A3, A2, A6, A5, A1, B [start at #13], A4	**11**	A1, A3, A6, A4, A5, A2, B [start at #5]	**15**	A3, A2, A6, A5, A1, B [start at #13], A4
4	B [start at #7], A6, A1, A5, A2, A3, A4	**8**	A4, A5, B [start at #15], A3, A6, A2, A1	**12**	B [start at #7], A6, A1, A5, A2, A3, A4	**16**	A4, A5, B [start at #15], A3, A6, A2, A1

Part A Questions

Fill-out the response for the allocation game: where the number you have to write down is the number of tokens given by the participant to the receiver.
*For questions **A1 and A2**: remember the participants are sharing [kwekwe] with **someone from a different village in their chiefdom**.*

A1 The person receiving the money is a randomly chosen *Taa Gbakoi* (T e.g. village chief, an imam, a division head, a societal head, a town speaker, etc) from a randomly chosen village in your chiefdom, not from your village.	Amount sent [kwekwe] to other	
A2 The person receiving the money is a randomly chosen Nu Gbamei (e.g. farmer, youth, etc) not a *Taa Gbakoi* from a randomly chosen village in your chiefdom, not from your village.	Amount sent [kwekwe] to other	

Again, write down is the number of tokens given by the participant to the receiver.

A3 The person receiving the money is a randomly chosen *Taa Gbakoi* (T e.g. village chief, an imam, a division head, a societal head, a town speaker, etc) from your village. He or she may or may not be have come with you today from your village.	Amount sent [kwekwe] to other	
A4 The person receiving the money is a randomly chosen Nu Gbamei (e.g. farmer, youth, etc) not a *Taa Gbakoi* from your village. He or she may or may not be have come with you today from your village.	Amount sent [kwekwe] to other	

Again, write down is the number of tokens given by the participant to the receiver.

A5 The person receiving the money is a randomly chosen *Taa Gbakoi* (e.g. village chief, an imam, a division head, a societal head, a town speaker, etc) from the people from your village that came with you today from your village.	Amount sent [kwekwe] to other	
A6 The person receiving the money is a randomly Nu Gbamei (e.g. farmer, youth, etc) not a *Taa Gbakoi* from the people from your village that came with you today from your village.	Amount sent [kwekwe] to other	

Part B Questions

*Before you continue: make sure you have a copy of the **Participants List.***

Use the Allocation Game Question Order Box, repeated here for your convenience:

Allocation Game Question Order Box

ID	Question Order	ID	Question Order	ID	Question Order	ID	Question Order
1	A4, B[start at #2], A6, A5, A1, A3, A2	**5**	A4, A2, A6, A1, A3, B [start at #9], A5	**9**	A4, B[start at #2], A6, A5, A1, A3, A2	**13**	A4, A2, A6, A1, A3, B [start at #9], A5
2	A5, A6, A1, A4, A3, B [start at #3], A2	**6**	A3, B [start at #11], A2, A5, A4, A6, A1	**10**	A5, A6, A1, A4, A3, B [start at #3], A2	**14**	A3, B [start at #11], A2, A5, A4, A6, A1
3	A1, A3, A6, A4, A5, A2, B [start at #5]	**7**	A3, A2, A6, A5, A1, B [start at #13], A4	**11**	A1, A3, A6, A4, A5, A2, B [start at #5]	**15**	A3, A2, A6, A5, A1, B [start at #13], A4
4	B [start at #7], A6, A1, A5, A2, A3, A4	**8**	A4, A5, B [start at #15], A3, A6, A2, A1	**12**	B [start at #7], A6, A1, A5, A2, A3, A4	**16**	A4, A5, B [start at #15], A3, A6, A2, A1

Circle which ID number (1, 3, 5, etc.) you started with in this interview.

Put an "X" through the ID code of the person you are speaking to.

Fill out the response of the participant below for each person listed on the Participants List

HH ID# (circle which one you start with)	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Amount kwekwe with other																

****HAVE YOU ASKED BOTH PART A AND PART B QUESTIONS??*

[Enumerator opinion] In how far did the participant understood the activities: _____
[CODES: 1 (not at all) – 10(understood completely)

Individual Survey

Date of Visit (DD/MM/YY):	**/ / 2013**		
Site Town Name:		Site Town Code:	
Respondent name:		Respondent ID:	
Chiefdom:		Chiefdom Code:	
Village Name:		Village Code:	
Enumerator Name:		Enumerator ID	

1. Age:		2. Gender	M F
3. Farm size (bushels of upland rice planted last year)		4. Number of people in your household	
5. How many chickens do you own?		6. Do you have a zinc roof?	Y N
7. If everyone in your village was on a ladder with ten steps, and the higher you are on the ladder the richer you are, what step are you on?			
8. Ethnic group:	1 Mende 2 Gola 3 Fula 4 Temne 5 Loko 6 Madingo 7 Kono 8 Vai 9 Other: _____		
9. Can you read and write?		10. Arabic education	Y N
11. Position in community	1.Village Chief 2.Division Head 3.Woman leader 4.Town speaker 5.Youth leader 6.Societal head 7.Religious leader 8.Elder 9.Trader 10.Farmer 11.Student 12.Other_____		
12. Religion	1.Christian 2.Muslim 3.ATR 4.Christian/ATR 5.Muslim/ATR 6.Other:_____	13. Are you considered a stranger in the village you live in?	Y N
14. Were you born in the village you live in> **-> if yes go to question 17**	Y N	15. Year you arrived in the village	
16. Why did you move to the village you live in now?			
17. Did you leave your village during the war	Y N	18. Did someone in your family die due to the war?	Y N
19. Are you related by blood to any chiefs?	1. Paramount Chief 2. Section Chief 3. Village Chief 4. Other: _____ 5. No		
20. Do you think one of your family members could become a town chief?	Y N	21. Are you a trader?	Y N
22. If yes, what do you trade?			
23. How often do you go to a market day (i.e. Ndowai)?			
1.Almost every day 2.Few times a week 3.Few times a month 4.Few times per year 5.Once or less than once per year 6.Never			
24. If you go to a market, do you bargain for lower prices?	Y N	25. Do you sell anything that you produce or grow? **-> if "No" go to question 28**	Y N

26. If yes, what do you sell?		27. If yes, **how** do you decide the selling price?	1.I have no choice—only one price at the market 2.I want to sell at the price everyone else is selling at 3.I want to sell for a little less than others to sell more 4.Other:

DYAD CHARACTERISTICS

The next questions ask about the relationships between participants.
*Take the **Participants list** and ask which other participant fall into that category. For example ask: **Of all the other participants in the market activity you just did,** is any of them you friend? (Instead of asking the question over and over again for each participant; Is participant (ID1) a friend of you? Is participant (ID2) a friend of you?)*
Put Y for YES and N for NO unless otherwise indicated
Put a cross to the column this household is.

Start every question with*: "Of all the other participants in the market activity you just did,…. "*

HH ID #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
28. Who is related to you by blood (parent, sibling, cousin)?																
29. Do you farm with someone from their household?																
30. Who do you meet and talk to at least twice a week?																
31. Do you often share or borrow food/money with any of their household?																
32. With whom were you displaced to the same area during the war?																
33. In your opinion this person is: [put: H = Taa Gbakoi, high status; L = Nu Gbamei, low status]																

Math test

If they do not know or cannot answer then write "NO"

34. If you buy 8 loafs of bread for 500 Le each, how much do you have to pay?	
35. If the price of a buttercup of rice is 1000 Le and went down by 10%, how much would you have to pay?	
36. How much is 12 + 15	
37. How much is 13-7	
38. How much is 12 x 4	